

## RGS Series

Rugged Switch Series

Version 1  
Edition 2, 07/2019

# CLI Reference Guide

### Default Login Details

LAN IP Address	http://192.168.1.1
User Name	admin
Password	1234

**IMPORTANT!****READ CAREFULLY BEFORE USE.****KEEP THIS GUIDE FOR FUTURE REFERENCE.**

This is a Reference Guide for a series of products intended for people who want to configure the Switch via Command Line Interface (CLI).

Note: Some commands or command options in this guide may not be available in your product. See your product's User's Guide for a list of supported features. Every effort has been made to ensure that the information in this guide is accurate.

**Related Documentation**

- User's Guide

The User's Guide explains how to use the Web Configurator to configure the Switch.

Note: It is recommended you use the Web Configurator to configure the Switch.

- More Information

Go to **support.zyxel.com** to find other information on the Switch.



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# **1. Scope**

---

**1.1 Scope**

**1.2 Audience**

**1.3 Pre-required Knowledge**

**1.4 Access to Hardware Interface**

**1.5 Related Documents**

# 1 Scope

## 1.1 Scope

This user guide describes the commands and parameters of the Command Line Interface (CLI) as implemented in the current version of RGS series software. These commands are used to set-up, administer and maintain the system.

## 1.2 Audience

The guide is intended for Operating personnel (sometimes called craft persons).

## 1.3 Pre-required Knowledge

The reader must be familiar with the:

- Basic operations of RGS series (see the HW Installation Guide).
- Security and activity monitoring constraints that limit how a command is implemented.

## 1.4 Access to Hardware Interface

Access to the hardware interface is by a terminal (or computer with terminal emulation software). Requirements for the terminal are:

- RS-232 ASCII port
- Selectable transmission baud rate
- Full alphanumeric capability
- Selectable odd/even or no parity check

## 1.5 Related Documents

You may want to refer to the following related documents:

- RGS series Quick Start Guide

## **2. Operator Interface**

---

***2.1 Introduction***

***2.2 Connect Interface***

***2.3 Authorization Level***

***2.4 Screen Description***

***2.5 Execution Modes***

***2.6 Getting Help***

***2.7 Terminal Key Function***

***2.8 Notation Conventions***

## 2 Operator Interface

### 2.1 Introduction

Access to the Switch is protected by a logon security system. You can log on to the switch with the user name and password. After three failed logon attempts, the system refuses further attempts.

After you log on, the system monitors the interface for periods of inactivity. If the interface is inactive for too long, you are automatically logged off.

The CLI initial user name is (admin) and none password (). You should change the password as soon as possible, because the initial password is known to anyone who reads this manual. You can also change the user name or add additional user names. Use the "account add" command to enter a new user identification, password and authorization level.

### 2.2 Connect Interface

Interface	Parameter
Console	Baud rate: 115200bps, Data bit: 8, Parity: None, Stop bit: 1
Telnet	Port 23
SSH	Port 22 (In Windows, you can run terminal emulator such as PuTTY)

### 2.3 Screen Description

1. Connecting to RGS series Ethernet port(RJ45 Ethernet port)
2. Key-in the command under Telnet: **Telnet 192.168.1.1**

Login with default account and password.

**Username: admin**

**Password: 1234**

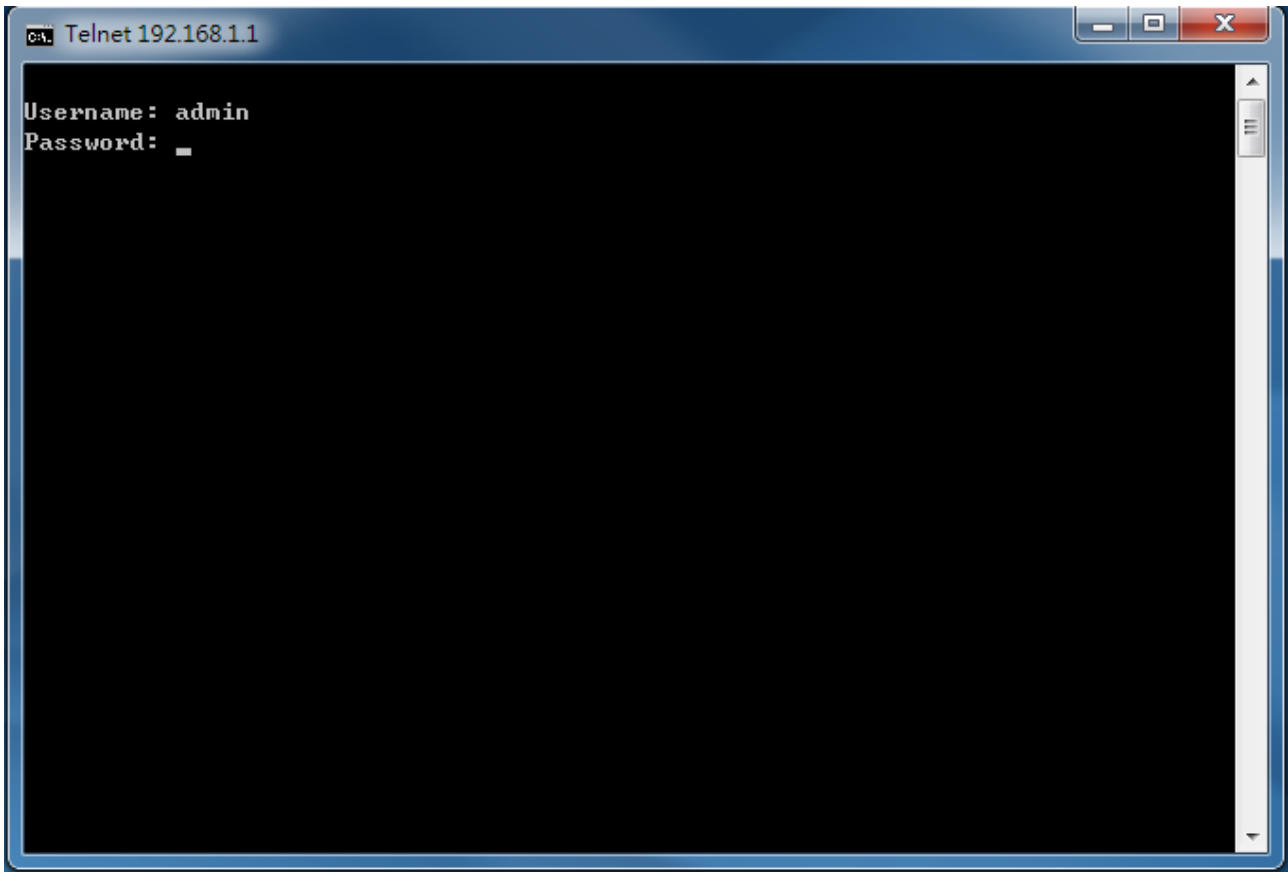


Figure 2-1 Screen Description

## 2.4 Execution Modes

The CLI contains several execution modes. Users will see different set of commands under different execution modes. Table 2-1 lists all the execution modes and their purposes. When users enter a certain execution mode, the corresponding mode prompt will be displayed automatically on the screen. The mode prompts of all the execution modes are also listed in Table 2-1.

Table 2-1 List of Execution Modes

Mode	Access Level	Prompt
Init Mode	Guest	>
Enable Mode	Guest	#
Config Mode	Guest	(conf)#
Alarm Profile Config Mode	Engineer	(alarm-profile-conf)#
Gigabit Interface Config Mode	Engineer	(gigabit-intf-conf)#
ACL Profile Config Mode	Engineer	(acl-profile-conf)#
scheduler Profile Config Mode	Engineer	(sch-profile-conf)#
Vlan Interface Config Mode	Engineer	(vlan-intf-conf)#
IGMP MVR Profile Config Mode	Engineer	(igmp-mvr-profile-conf)#
IGMP ACL Profile Config Mode	Engineer	(igmp-acl-profile-conf)#
RingV2 Group Config Mode	Engineer	(ring)#
Trunk Group Config Mode	Engineer	(trunk-group-conf)#

## 2.5 Getting help

The user can get help by entering a question mark '?' at each position in the command. The displayed result depends on the execution mode and previous input.

## 2.6 Terminal Key Function

Following is the list of all the terminal keys and their function.

Table 2-2 List of Terminal Keys

ENTER	Run a CLI config script
CTRL-M	
TAB	Tab completion.
CTRL-I	If tab is pressed after a non-whitespace character, complete the word before the Tab. If tab is pressed after a whitespace character, complete the next word.
?	Display available commands If ? is pressed after a non-whitespace character, show possible choices for this word. If ? is pressed after a whitespace character, show possible choices for the next word.
<Up Arrow>	Up history
CTRL-P	
<Down Arrow>	Down history
CTRL-N	
Home	Move the cursor to the beginning of the input line
CTRL-A	
End	Move the cursor to the end of the input line
CTRL-E	
<Left Arrow>	Move the cursor backward
CTRL-B	
<Right Arrow>	Move the cursor forward
CTRL-F	
BACKSPACE	Erase the character before the cursor
CTRL-H	

## 2.7 Notation Conventions

The notation conventions for the parameter syntax of each CLI command are as follows:

- Parameters enclosed in [ ] are optional.
- Parameter values are separated by a vertical bar "|" only when one of the specified values can be used.
- Parameter values are enclosed in { } when you must use one of the values specified.



## **3. Commands Descriptions**

---

- 3.1      *Initialize Mode Commands***
- 3.2      *Enable Mode Commands***
- 3.3      *Configure Mode Commands***
- 3.4      *VLAN Mode Commands***
- 3.5      *Interface VLAN Mode Commands***
- 3.6      *Ring Group Mode Commands***
- 3.7      *Spanning Tree Configure Commands***
- 3.8      *sFlow Configure Command***
- 3.9      *SNMP Configure Command***
- 3.10     *Qos Function Command***
- 3.11     *IGMP Functional Commands***
- 3.12     *MVR Functional Commands***
- 3.13     *MLD Functional Commands***
- 3.14     *Authenticate Mode Commands***
- 3.15     *Loop-Protection Configure commands***
- 3.16     *LLDP Configure commands***
- 3.17     *RFC2544 Testing Configure Commands***
- 3.18     *GVRP Configure Commands***
- 3.19     *Voice VLAN Configure Commands***

## 3 Commands Descriptions

### 3.1 Initialize Mode Commands

The commands in this section (except 'enable' command) can be executed under all command modes. These commands are global commands.

#### 3.1.1 exit

<b>Description</b>	Exit current mode and quit CLI.
<b>Syntax</b>	exit
<b>Parameter</b>	None

#### 3.1.2 configure terminal

<b>Description</b>	Enter configuration mode.
<b>Syntax</b>	configure terminal
<b>Parameter</b>	None

#### 3.1.3 enable

<b>Description</b>	Enter enable mode.
<b>Syntax</b>	enable
<b>Parameter</b>	None

#### 3.1.4 Show terminal

<b>Description</b>	Show CLI environment variables
<b>Syntax</b>	show terminal
<b>Parameter</b>	None

#### 3.1.5 Show history

<b>Description</b>	Show command history (Note: commands issued in one execution mode only appear in history of that execution mode)
<b>Syntax</b>	show history
<b>Parameter</b>	None

#### 3.1.6 Show clock

<b>Description</b>	Show current time
<b>Syntax</b>	show clock [detail]
<b>Parameter</b>	None

#### 3.1.7 Show clock detail

<b>Description</b>	Show detailed information
<b>Syntax</b>	show clock detail
<b>Parameter</b>	None

## 3.2 Enable Mode Commands

All the “show - -” commands in this section can also be executed under any other command mode except Initialize Mode.

### 3.2.1 configure terminal

<b>Description</b>	Enter configuration mode.
<b>Syntax</b>	configure
<b>Parameter</b>	None

### 3.2.2 disable

<b>Description</b>	Enter init mode.
<b>Syntax</b>	disable
<b>Parameter</b>	None

### 3.2.3 show aaa

<b>Description</b>	Show AAA
<b>Syntax</b>	show aaa
<b>Parameter</b>	None

### 3.2.4 show access management

<b>Description</b>	Access management configuration	
<b>Syntax</b>	show access management [ statistics   <access_id_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	statistics	Statistics data
	access_id_list	ID of access management entry

### 3.2.5 show access-list

<b>Description</b>	Access list	
<b>Syntax</b>	show access-list [ interface [ ( <port_type> [ <v_port_type_list> ] ) ] ] [ rate-limiter [ <rate_limiter_list> ] ] [ ace statistics [ <ace_list> ] ]  show access-list ace-status [ static ] [ loop-protect ] [ dhcp ] [ ptp ] [ upnp ] [ arp-inspection ] [ mep ] [ ipmc ] [ ip-source-guard ] [ ip-mgmt ] [ conflicts ] [ switch <switch_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	interface	Select an interface to configure
	ace-status	The local ACEs status
	port_type	GigabitEthernet,1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-14
	rate-limiter	Rate limiter
	rate_limiter_list	<RateLimiterList : 1~16> Rate limiter ID
	ace	Access list entry
	statistics	Traffic statistics
	ace_list	<Aceld : 1~256> ACE ID
	static	The ACEs that are configured by users manually
	loop-protect	The ACEs that are configured by Loop Protect module
	ipmc	The ACEs that are configured by IPMC module
	ip-source-guard	The ACEs that are configured by IP Source Guard module

	dhcp	The ACEs that are configured by DHCP module
	conflicts	The ACEs that did not get applied to the hardware due to hardware limitations
	arp-inspection	The ACEs that are configured by ARP Inspection module

### 3.2.6 show aggregation

<b>Description</b>	Aggregation	
<b>Syntax</b>	show aggregation [ mode ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	mode	Traffic distribution mode

### 3.2.7 show alarm

<b>Description</b>	Alarm information	
<b>Syntax</b>	show alarm { history   current }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	current	Show alarm current information
	history	Show alarm history information

### 3.2.8 show cpu-load

<b>Description</b>	CPU LOAD
<b>Syntax</b>	show cpu-load
<b>Parameter</b>	

### 3.2.9 show green-ethernet

<b>Description</b>	EEE	
<b>Syntax</b>	show green-ethernet [ interface ( <port_type> [ <port_list> ] ) ] show green-ethernet eee [ interface ( <port_type> [ <port_list> ] ) ] show green-ethernet energy-detect [ interface ( <port_type> [ <port_list> ] ) ] show green-ethernet short-reach [ interface ( <port_type> [ <port_list> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	EEE	Shows EEE status for a specific port or ports
	energy-detect	Shows EEE energy-detect status for a specific port or ports
	short-reach	Shows EEE short-reach status for a specific port or ports
	interface	Shows EEE status for a specific port or ports
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	port_list	<port_type_list> Port list in 1/1-14

### 3.2.10 show ip

<b>Description</b>	IP information	
<b>Syntax</b>	show ip	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

	arp	Address Resolution Protocol
	dhcp	Dynamic Host Configuration Protocol
	http	Hypertext Transfer Protocol
	igmp	Internet Group Management Protocol
	interface	IP interface status and configuration
	name-server	Domain Name System
	route	Display the current ip routing table
	source	source command
	ssh	Secure Shell
	statistics	Traffic statistics
	verify	verify command

### 3.2.11 show ipmc

<b>Description</b>	IPMC information	
<b>Syntax</b>	show ipmc profile [ <profile_name> ] [ detail ] show ipmc range [ <entry_name> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	profile	IPMC profile configuration
	range	A range of IPv4/IPv6 multicast addresses for the profile
	profile_name	<ProfileName : word16> Profile name in 16 char's
	detail	Detail information of a profile
	entry_name	<EntryName : word16> Range entry name in 16 char's

### 3.2.12 show ipv6

<b>Description</b>	IPv6 information	
<b>Syntax</b>	show ipv6	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	interface	Select an interface to configure
	mld	Multicasat Listener Discovery
	neighbor	IPv6 neighbors
	route	IPv6 routes
	statistics	Traffic statistics

### 3.2.13 show lacp

<b>Description</b>	LACP information	
<b>Syntax</b>	show lacp { internal   statistics   system-id   neighbour }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	internal	Internal LACP configuration
	neighbour	Neighbour LACP status
	statistics	Internal LACP statistics
	system-id	LACP system id

### 3.2.14 show line

<b>Description</b>	Alive line information	
<b>Syntax</b>	show line [ alive ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	alive	Display information about alive lines

### 3.2.15 show logging

<b>Description</b>	Logging information	
<b>Syntax</b>	show logging <log_id> [ switch <switch_list> ] show logging [ info ] [ warning ] [ error ] [ switch <switch_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	log_id	<logging_id: 1-4294967295> Logging ID
	error	Error
	info	Information
	warning	Warning

### 3.2.16 show loop-protect

<b>Description</b>	Loop protect information	
<b>Syntax</b>	show loop-protect [ interface ( <port_type> [ <plist> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	interface	Interface status and configuration
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	plist	<port_type_list> Port list in 1/1-14

### 3.2.17 show ntp status

<b>Description</b>	Show SNTP information.
<b>Syntax</b>	show sntp
<b>Parameter</b>	None

### 3.2.18 show users

<b>Description</b>	Show account list.
<b>Syntax</b>	show account
<b>Parameter</b>	None

### 3.2.19 show running-cfg

<b>Description</b>	Show running configuration.
<b>Syntax</b>	show running-cfg
<b>Parameter</b>	None

### 3.2.20 show running-config interface Gigabit

<b>Description</b>	Show port config	
<b>Syntax</b>	show running-config interface ( <port_type> [ <list> ] ) [ all-defaults ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	list	<port_type_list> Port list in 1/1-14
	all-defaults	Include most/all default values

### 3.2.21 show running-config interface vlan

<b>Description</b>	Show default running configuration.
<b>Syntax</b>	show running-config interface vlan <vlan_list> [ all-defaults ]
<b>Parameter</b>	None

### 3.2.22 show running-config all-defaults

<b>Description</b>	Show all default setting
<b>Syntax</b>	show running-config [ all-defaults ]
<b>Parameter</b>	None

### 3.2.23 show running-config feature

<b>Description</b>	Show running config feature	
<b>Syntax</b>	show running-config feature <feature_name> [ all-defaults ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	feature_name	CWORD  Valid words are 'GVRP' 'access' 'access-list' 'aggregation' 'alm_profile' 'arp-inspection' 'auth' 'clock' 'dhcp' 'dhcp-snooping' 'dhcp_server' 'dns' 'dot1x' 'green-ethernet' 'http' 'icli' 'ip-igmp-snooping' 'ip-igmp-snooping-port' 'ip-igmp-snooping-vlan' 'ipmc-profile' 'ipmc-profile-range' 'ipv4' 'ipv6' 'ipv6-mld-snooping' 'ipv6-mld-snooping-port' 'ipv6-mld-snooping-vlan' 'lACP' 'lldp' 'logging' 'loop-protect' 'mac' 'monitor' 'mstp' 'mvr' 'mvr-port' 'ntp' 'phy' 'port' 'port-security' 'pvlan' 'qos' 'rmon' 'snmp' 'source-guard' 'ssh' 'tring_g1' 'tring_g2' 'tring_g3' 'user' 'vlan' 'voice-vlan' 'web-privilege-group-level'
	all-defaults	Include most/all default values

### 3.2.24 show running-config line

<b>Description</b>	Line information	
<b>Syntax</b>	show running-config line { console   vty } <list> [ all-defaults ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	console	Console
	vty	VTY
	list	<range_list> List of console/VTYs
	all-defaults	Include most/all default values

### 3.2.25 show running-config vlan

<b>Description</b>	VLAN information	
<b>Syntax</b>	show running-config vlan <list> [ all-defaults ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	list	<vlan_list> List of VLAN numbers
	all-defaults	Include most/all default values

### 3.2.26 show version

<b>Description</b>	Show firmware hardware and software status update status.
<b>Syntax</b>	show version
<b>Parameter</b>	None

### 3.2.27 show clock

<b>Description</b>	Show current time.
<b>Syntax</b>	Show clock
<b>Parameter</b>	None

### 3.2.28 show ddmi

<b>Description</b>	Show DDMI configuration
<b>Syntax</b>	show ddmi
<b>Parameter</b>	None

### 3.2.29 show version

<b>Description</b>	Show version information.
<b>Syntax</b>	show version
<b>Parameter</b>	None

### 3.2.30 show system inventory

<b>Description</b>	Show system inventory.
<b>Syntax</b>	show system inventory
<b>Parameter</b>	None

### 3.2.31 show mac address table aging-time

<b>Description</b>	Show aging time for MAC learning table (system-wide).
<b>Syntax</b>	show aging time
<b>Parameter</b>	None

### 3.2.32 show mac address table

<b>Description</b>	Show MAC learning table.
<b>Syntax</b>	show mac address-table [ conf   static   aging-time   { { learning   count } [ interface <port_type> [ <port_type_list> ] ] }   { address <mac_addr> [ vlan <vlan_id> ] }   vlan <vlan_id>   interface <port_type> [ <port_type_list> ] ]
<b>Parameter</b>	None

### 3.2.33 show mac address table conf

<b>Description</b>	User added static mac addresses	
<b>Syntax</b>	show mac address-table [ conf   static   aging-time   { { learning   count } [ interface ( <port_type> [ <v_port_type_list> ] ) ] }   { address <v_mac_addr> [ vlan <v_vlan_id> ] }   vlan <v_vlan_id_1>   interface ( <port_type> [ <v_port_type_list_1> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.2.34 show mac address table count

<b>Description</b>	Total number of mac addresse	
<b>Syntax</b>	show mac address-table [ conf   static   aging-time   { { learning   count } [ interface ( <port_type> [ <v_port_type_list> ] ) ] }   { address <v_mac_addr> [ vlan <v_vlan_id> ] }   vlan <v_vlan_id_1>   interface ( <port_type> [ <v_port_type_list_1> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.2.35 show mac address table learning

<b>Description</b>	Learn/disable/secure stat	
<b>Syntax</b>	show mac address-table [ conf   static   aging-time   { { learning   count } [ interface ( <port_type> [ <v_port_type_list> ] ) ] }   { address <v_mac_addr> [ vlan <v_vlan_id> ] }   vlan <v_vlan_id_1>   interface ( <port_type> [ <v_port_type_list_1> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>



### 3.2.36 show mac address table static

<b>Description</b>	All static mac addresses	
<b>Syntax</b>	show mac address-table [ conf   static   aging-time   { { learning   count } [ interface ( <port_type> [ <v_port_type_list> ] ) ] }   { address <v_mac_addr> [ vlan <v_vlan_id> ] }   vlan <v_vlan_id_1>   interface ( <port_type> [ <v_port_type_list_1> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.2.37 show mac address table interface

<b>Description</b>	Show MAC learning table per port.	
<b>Syntax</b>	show mac address-table [ interface <port_type> [ <port_type_list> ] ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	<b>Valid values:</b> 1 ~10 <b>Type:</b> Mandatory

### 3.2.38 show mac address vlan <vlanid>

<b>Description</b>	Show MAC learning table per VLAN index.	
<b>Syntax</b>	show mac address-table { learning   count } vlan <vlan_id>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1~4094 <b>Type:</b> Mandatory

### 3.2.39 show mvr

<b>Description</b>	MVR information	
<b>Syntax</b>	show mvr [ vlan <v_vlan_list>   name <mvr_name> ] [ group-database [ interface ( <port_type> [ <v_port_type_list> ] ) ] [ sfm-information ] ] [ detail ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan	Search by VLAN
	v_vlan_list	<vlan_list> MVR multicast VLAN list
	name	Search by MVR name
	mvr_name	<MvrName : word16> MVR multicast VLAN name
	group-database	Multicast group database from MVR
	interface	Search by port
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-14
	sfm-information	Including source filter multicast information from MVR
	detail	Detail information/statistics of MVR group database

### 3.2.40 show fdb static table

<b>Description</b>	Show static MAC forwarding table.	
<b>Syntax</b>	show mac address-table static	
<b>Parameter</b>	None	

### 3.2.41 show fdbstatic interface gigabit <portNo>

<b>Description</b>	Show static MAC forwarding table per gigabit port.	
<b>Syntax</b>	Show mac address-table { learning   count } [ interface <port_type> [ <port_type_list> ] ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<port_type>	Port type in Fast or Giga Ethernet
	<portNo>	<b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory

### 3.2.42 show fdbstatic vlan <vlanid>

<b>Description</b>	Show static MAC forwarding table per VLAN index.	
<b>Syntax</b>	show mac address-table { learning   count } vlan <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1~4094 <b>Type:</b> Mandatory

### 3.2.43 show interface port < port\_type\_list >

<b>Description</b>	Show interface information per \port.	
<b>Syntax</b>	show interface <port_type> [ <port_type_list> ] status	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<port_type>	Port type in Fast or Giga Ethernet
	<portNo>	<b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory

### 3.2.44 show interface port <portNo> statistics

<b>Description</b>	Show Ethernet counter per gigabit port.	
<b>Syntax</b>	show interface <port_type> [ <port_type_list> ] statistics	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<port_type>	Port type in Fast or Giga Ethernet
	<portNo>	<b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory
	counter	Show Gigabit Ethernet counter.

### 3.2.45 show platform phy

<b>Description</b>	PHYs' information	
<b>Syntax</b>	show platform phy [ interface ( <port_type> [ <v_port_type_list> ] ) ]  show platform phy id [ interface ( <port_type> [ <v_port_type_list> ] ) ]  show platform phy instance  show platform phy status [ interface ( <port_type> [ <v_port_type_list> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	id	ID
	instance	PHY Instance Information
	status	Status
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-12

### 3.2.46 show poe

<b>Description</b>	Show PoE status and information for each port	
<b>Syntax</b>	show poe show poe [ interface ( <port_type> [ <v_port_type_list> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	poe	Power over Ethernet
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-12

### 3.2.47 show port-security

<b>Description</b>	Port security	
<b>Syntax</b>	show port-security	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port	Show MAC Addresses learned by Port Security
	switch	Show Port Security status
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-12

### 3.2.48 show profile alarm

<b>Description</b>	Profile alarm
<b>Syntax</b>	show profile alarm
<b>Parameter</b>	None

### 3.2.49 show snmp

<b>Description</b>	SNMP information	
<b>Syntax</b>	<pre>show snmp show snmp access [ &lt;group_name&gt; { v1   v2c   v3   any } { auth   noauth   priv } ] show snmp community v3 [ &lt;community&gt; ] show snmp host [ &lt;conf_name&gt; ] [ system ] [ switch ] [ interface ] [ aaa ] show snmp mib context show snmp mib ifmib ifIndex show snmp security-to-group [ { v1   v2c   v3 } &lt;security_name&gt; ] show snmp user [ &lt;username&gt; &lt;engineID&gt; ] show snmp view [ &lt;view_name&gt; &lt;oid_subtree&gt; ]</pre>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	access	access configuration
	group_name	<GroupName : word32> group name
	any	any security model
	v1	v1 security model
	v2c	v2c security model
	v3	v3 security model
	auth	authNoPriv Security Level
	noauth	noAuthNoPriv Security Level
	priv	authPriv Security Level
	community	Community
	community	<Community : word127> Specify community name
	host	Set SNMP host's configurations
	conf_name	<ConfName : word32> Name of the host configuration
	aaa	AAA event group
	interface	Interface event group
	switch	Switch event group
	system	System event group
	mib	MIB(Management Information Base)
	context	MIB context
	ifmib	IF-MIB
	ifIndex	The IfIndex that is defined in IF-MIB
	security-to-group	security-to-group configuration
	security_name	<SecurityName : word32> security group name
	user	User
	username	<Username : word32> Security user name
	engineID	<Engiedid : word10-32> Security Engine ID

	view	MIB view configuration
	view_name	<ViewName : word32> MIB view name
	oid_subtree	<OidSubtree : word255> MIB view OID

### 3.2.50 show spanning-tree

<b>Description</b>	System Wide Spanning Tree Setting/Status.	
<b>Syntax</b>	show spanning-tree [ summary   active   { interface ( <port_type> [ <v_port_type_list> ] ) }   { detailed [ interface ( <port_type> [ <v_port_type_list_1> ] ) ] }   { mst [ configuration   { <instance> [ interface ( <port_type> [ <v_port_type_list_2> ] ) ] } ] } ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	active	STP active interfaces
	detailed	STP statistics
	interface	Choose port
	mst	Configuration
	summary	STP summary

### 3.2.51 show switchport forbidden

<b>Description</b>	Lookup VLAN Forbidden port entry	
<b>Syntax</b>	show switchport forbidden [ { vlan <vid> }   { name <name> } ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan	Show forbidden access for specific VLAN id
	vid	VLAN id
	name	Show forbidden access for specific VLAN name
	name	VLAN name

### 3.2.52 show tacacs-server

<b>Description</b>	TACACS+ configuration
<b>Syntax</b>	show tacacs-server
<b>Parameter</b>	

### 3.2.53 show vlan

<b>Description</b>	Show bridge port memberset/status.
<b>Syntax</b>	show vlan
<b>Parameter</b>	None

### 3.2.54 show vlan id

<b>Description</b>	Show bridge port member set/status per VLAN index (1~4094).	
<b>Syntax</b>	show vlan id <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1~4094 <b>Type:</b> Mandatory.

### 3.2.55 show vlan name

<b>Description</b>	Show bridge port member set/status per VLAN name ( 32 words ).	
<b>Syntax</b>	show vlan name <vword32>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vword32>	<b>Valid values:</b> 32 words <b>Type:</b> Mandatory.

### 3.2.56 show vlan brief

<b>Description</b>	VLAN summary information	
<b>Syntax</b>	show vlan [ id <vlan_list>   name <name>   brief ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	id	VLAN status by VLAN id
	vlan_list	<vlan_list> VLAN IDs 1-4095
	name	VLAN status by VLAN name
	name	<vword32> A VLAN name
	brief	VLAN summary information

### 3.2.57 show vlan status

<b>Description</b>	Show the VLANs configured for each interface	
<b>Syntax</b>	show vlan status [ interface ( <port_type> [ <plist> ] ) ] [ combined   admin   nas   mvr   voice-vlan   mstp   erps   vcl   evc   gvrp   all   conflicts ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	admin	Show the VLANs configured by administrator
	all	Show all VLANs configured
	combined	Show the VLANs configured by a combination
	conflicts	Show VLANs configurations that has conflicts
	gvrp	Show the VLANs configured by GVRP
	interface	Show the VLANs configured for a specific interface(s)
	mstp	Show the VLANs configured by MSTP.
	vcl	Show the VLANs configured by VCL
	voice-vlan	Show the VLANs configured by Voice VLAN

### 3.2.58 show qos-queue-mapping

<b>Description</b>	Show CoS queue mapping table.
<b>Syntax</b>	show qos maps
<b>Parameter</b>	None

### 3.2.59 show interface ports <portNo> priority

<b>Description</b>	Show QoS per gigabit port.	
<b>Syntax</b>	show interface <port_type> [ <port_type_list> ] statistics { priority [ <0~7> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	priority [ <0~7> ]	<b>Valid values:</b> 0 ~7 <b>Type:</b> Mandatory
	<port_type>	Port type in Fast, Giga ethernet
	<portNo>	<b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory

### 3.2.60 show qos

<b>Description</b>	Show scheduler profile table.
<b>Syntax</b>	show queue-scheduler profile
<b>Parameter</b>	None

### 3.2.61 show queue-shaper

<b>Description</b>	Show queue shaper information.
<b>Syntax</b>	show queue-shaper
<b>Parameter</b>	None

### 3.2.62 show port-shaper

<b>Description</b>	Show port shaper information.
<b>Syntax</b>	show port-shaper
<b>Parameter</b>	None

### 3.2.63 show interface gigabit <portNo> storm-control

<b>Description</b>	Show storm control information per gigabit port.	
<b>Syntax</b>	show interface gigabit <portNo> storm-control	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<port_type>	Port type in Fast, Giga ethernet
	<portNo>	<b>Valid values:</b> 1~12 <b>Type:</b> Mandatory

### 3.2.64 show interface gigabit <portNo> transceiver

<b>Description</b>	Show interface transceiver	
<b>Syntax</b>	show interface GigabitEthernet interface <port_type_list> transceiver	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	<b>Valid values:</b> 9 ~ 12 (for 14 port model) <b>Type:</b> Mandatory

### 3.2.65 show qos interface

<b>Description</b>	QoS interface information	
<b>Syntax</b>	show qos [ { interface [ ( <port_type> [ <port> ] ) ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	port	PORT_LIST, Port list in 1/1-14

### 3.2.66 show qos maps

<b>Description</b>	MAPS	
<b>Syntax</b>	show qos maps { maps [ dscp-cos ] [ dscp-ingress-translation ] [ dscp-classify ] [ cos-dscp ] [ dscp-egress-translation ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	cos-dscp	Map for cos to dscp
	dscp-classify	Map for dscp classify enable
	dscp-cos	Map for dscp to cos
	dscp-egress-translation	Map for dscp egress translation
	dscp-ingress-translation	Map for dscp ingress translation

### 3.2.67 show qos qce

<b>Description</b>	QCE	
<b>Syntax</b>	show qos { qce [ <qce> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	qce	<Id : 1-256> QCE ID

### 3.2.68 show qos storm {unknown-uc|unknown-mc|broadcast}

<b>Description</b>	Show storm control information by VLAN.	
<b>Syntax</b>	show vlan unknown-uc show vlan unknown-mc show vlan broadcast	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	unknown-uc	Show unknown unicast storm control information by VLAN. <b>Type:</b> Mandatory
	unknown-mc	Show unknown multicast storm control information by VLAN. <b>Type:</b> Mandatory
	broadcast	Show broadcast storm control information by VLAN. <b>Type:</b> Mandatory

### 3.2.69 show port-mirror

<b>Description</b>	Show port mirror information.
<b>Syntax</b>	show port-mirror
<b>Parameter</b>	None

### 3.2.70 show rmon

<b>Description</b>		
<b>Syntax</b>	show rmon alarm [ <id_list> ] show rmon event [ <id_list> ] show rmon history [ <id_list> ] show rmon statistics [ <id_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	alarm	Display the RMON alarm table
	event	Display the RMON event table
	history	Display the RMON history table
	statistics	Display the RMON statistics table
	id_list	<1~65535>, Statistics entry list

### 3.2.71 show interface gigabit <portNo>

<b>Description</b>	Show interface gigaport information	
<b>Syntax</b>	show interface gigabit <portNo>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	Gigabit port. <b>Valid values:</b> 1 ~ 10 <b>Type:</b> Mandatory



### 3.2.72 show interface vlan

<b>Description</b>	Show VLAN interface information of all VLANs.
<b>Syntax</b>	show interface vlan
<b>Parameter</b>	None

### 3.2.73 show interface vlan <vlanid>

<b>Description</b>	Show VLAN interface information of specify VLAN.	
<b>Syntax</b>	show interface vlan <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory

### 3.2.74 show interface gigabit <portNo> vlan

<b>Description</b>	Show vlan information per port	
<b>Syntax</b>	show interface gigabit <portNo> vlan	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	Gigabit port. <b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory

### 3.2.75 show multicast-fdb

<b>Description</b>	Show IGMP group membership table
<b>Syntax</b>	show multicast-fdb
<b>Parameter</b>	None

### 3.2.76 show dot1x

<b>Description</b>	Show dot1x information.
<b>Syntax</b>	show dot1x
<b>Parameter</b>	None

### 3.2.77 show dot1x status

<b>Description</b>	Show dot1x stats.
<b>Syntax</b>	show dot1x status [ interface <port_type> [ <port_type_list> ] ] [ brief ]
<b>Parameter</b>	None

### 3.2.78 show dot1x statistics

<b>Description</b>	Show dot1x statistics	
<b>Syntax</b>	show dot1x statistics { eapol   radius   all } [ interface ( <port_type> [ <v_port_type_list> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	all	Show all dot1x statistics
	eapol	Show EAPOL statistics
	radius	Show Backend Server statistics
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-14

### 3.2.79 show radius-server [ statistics ]

<b>Description</b>	show radius-server statistics	
<b>Syntax</b>	show radius-server [ statistics ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	[ statistics ]	Count radius packet statistics

### 3.2.80 show voice

<b>Description</b>	Vlan for voice traffic	
<b>Syntax</b>	show voice vlan [ oui <oui>   interface ( <port_type> [ <port_list> ] ) ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan	Vlan for voice traffic
	oui	OUI configuration
	oui	OUI value
	interface	Select an interface to configure
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	port_list	<port_type_list> Port list in 1/1-14

### 3.2.81 show web

<b>Description</b>	Web privilege	
<b>Syntax</b>	show web privilege group [ <group_name> ] level	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	privilege	Web privilege
	group	Web privilege grou
	group_name	CWORD Valid words are 'Aggregation' 'DHCP' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow'
	level	Web privilege group level

### 3.3 Configure Mode Commands

Commands that can be executed under Configure Mode

#### 3.3.1 interface gigabit <portNo>

<b>Description</b>	Gigabit Ethernet interface. (enter gigabit interface mode)	
<b>Syntax</b>	interface gigabit <portNo>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	<b>Valid values:</b> 1 ~ 10 <b>Type:</b> Mandatory

#### 3.3.2 interface vlan <vlanid>

<b>Description</b>	Vlan Ethernet interface (enter mode of interface vlan)	
<b>Syntax</b>	interface vlan <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory

#### 3.3.3 aaa

<b>Description</b>	Authentication	
<b>Syntax</b>	aaa authentication	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	authentication	Authentication

#### 3.3.4 access

<b>Description</b>	Management configuration	
<b>Syntax</b>	access management	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	management	Access management configuration

#### 3.3.5 access-list

<b>Description</b>	Enter Acl Profile Config Mode	
<b>Syntax</b>	profile acl	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory
<b>Parameter</b>	None	

#### 3.3.6 aggregation mode

<b>Description</b>	Traffic distribution mode	
<b>Syntax</b>	aggregation mode { dmac   ip   port   smac }	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	dmac	Destination MAC affects the distribution
	ip	IP address affects the distribution
	port	IP port affects the distribution
	smac	Source MAC affects the distribution

### 3.3.7 alarm history clear

<b>Description</b>	Clear alarm history	
<b>Syntax</b>	alarm history clear	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>

### 3.3.8 banner

<b>Description</b>	Banner control	
<b>Syntax</b>	banner { LINE   exec   login   motd }	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	LINE	c banner-text c, where 'c' is a delimiting character
	exec	Set EXEC process creation banner
	login	Set login banner
	motd	Set Message of the Day banner

### 3.3.9 ddmi

<b>Description</b>	Enable DDMI function
<b>Syntax</b>	ddmi
<b>Parameter</b>	None

### 3.3.10 default access-list rate-limiter

<b>Description</b>	Rate limiter	
<b>Syntax</b>	default access-list rate-limiter [ <rate_limiter_list> ]	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	RateLimiterId :	Rate limiter ID
	1-16	

### 3.3.11 profile sch

<b>Description</b>	Enter Scheduling Profile Config Mode
<b>Syntax</b>	profile sch
<b>Parameter</b>	None

### 3.3.12 ntp server <1-5> ip-address <ip>

<b>Description</b>	Set NTP server address.	
<b>Syntax</b>	ntp server <1-5> ip-address { <ipv4_ucast>   <ipv6_ucast>   <hostname> }	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	<1-5>	index number
	<ipv4> <ipv6 >	<b>Type:</b> Mandatory
	<hostname>	Server name

### 3.3.13 clock timezone

<b>Description</b>	Set time zone.	
<b>Syntax</b>	clock timezone <word16> <-23-23> [ <0-59> ]	
<b>Parameter</b>	<b>Name</b>	<b>Description</b>
	< word16>	<b>Valid values:</b> please see ' <a href="#">list timezone</a> '

		<b>Type:</b> Mandatory
	default	Set time zone to default (GMT/UTC). <b>Type:</b> Mandatory

### 3.3.14 clock summer-time set [start-time] [end-time]

<b>Description</b>	Set date/time.	
<b>Syntax</b>	clock summer-time <word16> date [ <1-12> <1-31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [ <1-1440> ] ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word16>	<b>Valid values:</b> please see ' <a href="#">list timezone</a> ' <b>Type:</b> Mandatory
	<day>	<b>Valid values:</b> 1 ~ 31 <b>Type:</b> Mandatory
	<month>	<b>Valid values:</b> 1 ~ 12 <b>Type:</b> Mandatory
	<year>	<b>Valid values:</b> 2000-2097 <b>Type:</b> Mandatory
	<minute>	<b>Valid values:</b> 0 ~ 59 <b>Type:</b> Mandatory
	<second>	<b>Valid values:</b> 0 ~ 59 <b>Type:</b> Optional

### 3.3.15 account add <username>

<b>Description</b>	Add an account.	
<b>Syntax</b>	username <word31> privilege <0-15> password encrypted <word4-44>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word31>	<b>Valid values:</b> 1 ~ 31 characters <b>Type:</b> Mandatory
	<0-15>	<b>Valid values:</b> 0 ~ 15 <b>Type:</b> Mandatory
	< word4-44>	<b>Valid values:</b> 4-44 characters <b>Type:</b> Mandatory

### 3.3.16 account delete <username>

<b>Description</b>	Delete an account.	
<b>Syntax</b>	no username <word31>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word31>	<b>Valid values:</b> 1 ~ 31 characters <b>Type:</b> Mandatory

### 3.3.17 configuration save and replace

<b>Description</b>	Save and install configuration	
<b>Syntax</b>	copy { startup-config   running-config   <Filename> } { startup-config   running-config   < Filename > } [ syntax-check ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	running-config	Currently running configuration
	startup-config	Startup configuration
	syntax-check	Perform syntax check on source configuration
	Filename	File in FLASH or on TFTP server

### 3.3.18 clear ip igmp snooping statistics

<b>Description</b>	clear ipigmpsnoopingstatisti	
<b>Syntax</b>	clear ip igmp snooping [ vlan<vlan_list> ] statistics	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	VLAN list.

### 3.3.19 clear logging

<b>Description</b>	clear logging	
<b>Syntax</b>	clear logging [ info ] [ warning ] [ error ] [ switch <switch_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	info	Information
	warning	Warning
	error	Error
	Switch list	List of switch ID, ex, 1,3-5,6

### 3.3.20 clear mac address-table

<b>Description</b>	clear mac address-table	
<b>Syntax</b>	clear mac address-table	
<b>Parameter</b>		

### 3.3.21 debug

<b>Description</b>	Set prompt for testing	
<b>Syntax</b>	debug prompt	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word>	Word for prompt in 32 char's

### 3.3.22 delete

<b>Description</b>	Delete one file in flash: file system	
<b>Syntax</b>	delete <word>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word>	Name of file to delete

### 3.3.23 dir

<b>Description</b>	Directory of all files in flash: file system	
<b>Syntax</b>	dir	
<b>Parameter</b>		

### 3.3.24 do

<b>Description</b>	To run exec commands in config mode	
<b>Syntax</b>	do <line>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<line>	Exec Command

### 3.3.25 duplex

<b>Description</b>	Set duplex mode	
<b>Syntax</b>	duplex { half   full   auto [ half   full ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

	half	Forced half duplex.
	full	Forced full duplex.
	auto	Auto negotiation of duplex mode.
	[ half   full ]	Advertise half /full duplex.

### 3.3.26 editing

<b>Description</b>	Enable command line editing
<b>Syntax</b>	editing
<b>Parameter</b>	

### 3.3.27 firmware

<b>Description</b>	Firmware swap and upgrade	
<b>Syntax</b>	firmware { swap   upgrade }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	swap	Swap between Active and Alternate firmware image
	upgrade	Firmware upgrade

### 3.3.28 flowcontrol

<b>Description</b>	Enable/Disable flow control.	
<b>Syntax</b>	flowcontrol { on   off }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	on	Enable flow control.
	off	Disable flow control.

### 3.3.29 frame-sizes

<b>Description</b>	Select the frame sizes that the enabled tests will loop through	
<b>Syntax</b>	frame-sizes { [ 64 ] [ 128 ] [ 256 ] [ 512 ] [ 1024 ] [ 1280 ] [ 1518 ] [ 2000 ] [ 9600 ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	64	Enable testing with 64-byte TST PDUs
	128	Enable testing with 128-byte TST PDUs
	256	Enable testing with 256-byte TST PDUs
	512	Enable testing with 512-byte TST PDUs
	1024	Enable testing with 1024-byte TST PDUs
	1280	Enable testing with 1280-byte TST PDUs
	1518	Enable testing with 1518-byte TST PDUs
	2000	Enable testing with 2000-byte TST PDUs
	9600	Enable testing with 9600-byte TST PDUs

### 3.3.30 green-etherneteee

<b>Description</b>	Powering down of PHYs when there is no traffic.
<b>Syntax</b>	green-etherneteee
<b>Parameter</b>	

### 3.3.31 green-etherneteee urgent-queues

<b>Description</b>	Enables EEE urgent queue. An urgent queue means that latency is kept to a minimum for traffic goin to that queue. Note: EEE power savings will be reduced.
<b>Syntax</b>	green-etherneteee urgent-queues [ <range_list> ]

<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	range_list	EEE Interface.

### 3.3.32 help

<b>Description</b>	Description of the interactive help system	
<b>Syntax</b>	help	
<b>Parameter</b>		

### 3.3.33 iparp inspection

<b>Description</b>	iparp inspection	
<b>Syntax</b>	iparp inspection	
<b>Parameter</b>		

### 3.3.34 ip arp inspection translate

<b>Description</b>	IP ARP inspection entry interface configuration	
<b>Syntax</b>	ip arp inspection translate [ interface <port_type><port_type_id><vlan_id><mac_ucast><ipv4_ucast> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port_type	Port type in Fast, Giga
	port_type_id	Port ID in the format of switch-no/port-no
	vlan_id	Select a VLAN id to configure
	mac_ucast	Select a MAC address to configure
	ipv4_ucast	Select an IP Address to configure

### 3.3.35 ip arp inspection entry

<b>Description</b>	arp inspection entry interface config	
<b>Syntax</b>	ip arp inspection entry interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port_type	Port type in Fast, Giga
	in_port_type_id	Port ID in the format of switch-no/port-no
	vlan_var	Select a VLAN id to configure
	mac_var	Select a MAC address to configure
	ipv4_var	Select an IP Address to configure

### 3.3.36 ip arp inspection vlan

<b>Description</b>	IP ARP inspection vlan setting	
<b>Syntax</b>	ip arp inspection vlan<vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	arp inspection vlan list

### 3.3.37 ip dns proxy

<b>Description</b>	IP DNS proxy service	
<b>Syntax</b>	ipdns proxy	
<b>Parameter</b>		



### 3.3.38 ip http secure-redirect

<b>Description</b>	IP http secure-redirect
<b>Syntax</b>	ip http secure-redirect
<b>Parameter</b>	

### 3.3.39 ip http secure-server

<b>Description</b>	IP Secure HTTP web server
<b>Syntax</b>	ip http secure-server
<b>Parameter</b>	

### 3.3.40 ip source binding interface

<b>Description</b>	IP source binding entry interface configuration	
<b>Syntax</b>	Ip source binding interface <port_type> <port_type_id> <vlan_id> <ipv4_ucast> <mac_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port_type	Port type in Fast, Giga or Tengigaethernet
	port_type_id	Port ID in the format of switch-no/port-no
	vlan_id	Select a VLAN id to configure
	ipv4_ucast	Select an IP Address to configure
	mac_ucast	Select a MAC address to configure

### 3.3.41 ip ssh

<b>Description</b>	IP Secure Shell
<b>Syntax</b>	ipssh
<b>Parameter</b>	

### 3.3.42 ip name-server

<b>Description</b>	IP name server	
<b>Syntax</b>	ip name-server { <v_ipv4_ucast>   dhcp [ interface vlan <v_vlan_id> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_ipv4_ucast	A valid IPv4 unicast address
	dhcp	Dynamic Host Configuration Protocol
	v_vlan_id	VLAN identifier(s): VID

### 3.3.43 ip route

<b>Description</b>	IP Route	
<b>Syntax</b>	ip route <v_ipv4_addr> <v_ipv4_netmask> <v_ipv4_gw>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_ipv4_addr	Network
	v_ipv4_netmask	Netmask
	v_ipv4_gw	Gateway

### 3.3.44 ip verify

<b>Description</b>	IP verify	
<b>Syntax</b>	ip verify [source] [translate]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	source	verify source
	translate	ip verify source translate all entries

### 3.3.45 ipmc profile

<b>Description</b>	IPMC profile configuration
<b>Syntax</b>	ipmc profile
<b>Parameter</b>	

### 3.3.46 ipmc range

<b>Description</b>	A range of IPv4/IPv6 multicast addresses for the profile	
<b>Syntax</b>	ipmc range <word16> { <ipv4_mcast> [ <ipv4_mcast> ]   <ipv6_mcast> [ <ipv6_mcast> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	word16	Range entry name in 16 char's
	ipv4_mcast	Valid IPv4 multicast address
	ipv4_mcast	Valid IPv4 multicast address that is not less than start address
	ipv6_mcast	Valid IPv6 multicast address
	ipv6_mcast	Valid IPv6 multicast address that is not less than start address

### 3.3.47 lacp

<b>Description</b>	LACP system priority	
<b>Syntax</b>	lacp system-priority <v_1_to_65535>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	system-priority	System priority
	<v_1_to_65535>	Priority value, lower means higher priority

### 3.3.48 line

<b>Description</b>	Console terminal control	
<b>Syntax</b>	line { <0~16>   console 0   vty <0~15> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~16>	List of line numbers
	console	Console terminal line
	vtty	Virtual terminal

### 3.3.49 login host

<b>Description</b>	Domain name and IP address	
<b>Syntax</b>	logging host { <v_ipv4_ucast>   <v_word45> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	hostname	Domain name of the log server
	ipv4_ucast	IP address of the log server

### 3.3.50 login level

<b>Description</b>	Log level	
<b>Syntax</b>	logging level { info   warning   error }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	error	Error
	info	Information
	warning	Warning

### 3.3.51 login on

<b>Description</b>	Log on
<b>Syntax</b>	logging on
<b>Parameter</b>	

### 3.3.52 logout

<b>Description</b>	System logout
<b>Syntax</b>	logout
<b>Parameter</b>	

### 3.3.53 mac address-table aging-time

<b>Description</b>	MAC table entries/configuration	
<b>Syntax</b>	mac address-table aging-time <v_0_10_to_1000000>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<v_0_10_to_1000000>	Aging time in seconds, 0 disables aging

### 3.3.54 mac address-table static

<b>Description</b>	MAC table entries/configuration	
<b>Syntax</b>	mac address-table static <v_mac_addr> vlan <v_vlan_id> interface ( <port_type> [ <v_port_type_list> ] )	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<v_mac_addr>	48 bit MAC address
	v_vlan_id	VLAN IDs 1-4095
	port_type	Select an interface to configure
	v_port_type_list	Port list

### 3.3.55 more

<b>Description</b>	File in FLASH or on TFTP server
<b>Syntax</b>	more <Path>
<b>Parameter</b>	

### 3.3.56 no

<b>Description</b>	Function disable	
<b>Syntax</b>	no { debug   port-securit   terminal }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	debug	Debugging functions
	port-securit	Port security (psec limit)
	terminal	Set terminal line parameters

### 3.3.57 ping

<b>Description</b>	The ping function	
<b>Syntax</b>	ping { ip   ipv6 }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ip	IP (ICMP) echo
	ipv6	IPv6 (ICMPv6) echo

### 3.3.58 port-security

<b>Description</b>	Port security
<b>Syntax</b>	port-security [aging] [time <v_10_to_10000000>]

Parameter	Name	Description
	aging	Enable/disable port security aging
	time	Time in seconds between check for activity on learned MAC addresses
	v_10_to_10000000	<10-10000000> seconds

### 3.3.59 privilege

Description	
Syntax	privilege { exec   configure   config-vlan   line   interface   if-vlan   ipmc-profile   snmps-host   stp-aggr   dhcp-pool   rfc2544-profile } level <privilege> <cmd>
Parameter	
Name	Description
config-vlan	VLAN Configuration Mode
configure	Global configuration mod
dhcp-pool	DHCP Pool Configuration Mode
exec	Exec mode
if-vlan	VLAN Interface Mode
interface	Port List Interface Mode
ipmc-profile	IPMC Profile Mode
line	Line configuration mode
rfc2544-profile	RFC2544 Profile Mode
snmps-host	SNMP Server Host Mode
stp-aggr	STP Aggregation Mode

### 3.3.60 reload

Description	System or configuration reset
Syntax	reload { cold   default }
Parameter	
Name	Description
cold	Reload cold
defaults	Reload defaults without rebooting

### 3.3.61 rmon

Description	RMON
Syntax	rmon {alarm   event}
Parameter	
Name	Description
alarm	Configure an RMON alarm
event	Configure an RMON event

### 3.3.62 rmon alarm

Description	RMON Alarm
Syntax	rmon alarm <id> <oid_str> <interval> { absolute   delta } rising-threshold <rising_threshold> [ <rising_event_id> ] falling-threshold <falling_threshold> [ <falling_event_id> ] { [ rising   falling   both ] }
Parameter	
Name	Description
id	Alarm entry ID
ifInDiscards	The number of inbound packets that are discarded even the packets are normal
flnErrors	The number of inbound packets that contained

		errors preventing them from being deliverable to a higher-layer protocol
	ifInNUcastPkts	The number of broad-cast and multi-cast packets delivered to a higher-layer protocol
	ifInOctets	The total number of octets received on the interface, including framing characters
	ifInUcastPkts	The number of uni-cast packets delivered to a higher-layer protocol
	ifInUnknownProtos	The number of the inbound packets that were discarded because of the unknown or un-support protocol
	ifOutDiscards	The number of outbound packets that are discarded event the packets is normal
	ifOutErrors	The The number of outbound packets that could not be transmitted because of errors
	ifOutNUcastPkts	The number of broad-cast and multi-cast packets that request to transmit
	ifOutOctets	The number of octets transmitted out of the interface, including framing characters
	ifOutUcastPkts	The number of uni-cast packets that request to transmi
	interval	Sample interval
	absolute	Test each sample directly
	delta	Test delta between samples
	rising_threshold	<-2147483648-2147483647> rising threshold value
	rising_event_id	<0-65535> Event to fire on rising threshold crossing
	falling_threshold	<-2147483648-2147483647> falling threshold value
	falling_event_id	<0-65535> Event to fire on falling threshold crossing
	both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
	falling	rigger alarm when the first value is less than the falling threshold
	rising	Trigger alarm when the first value is larger than the rising threshold

### 3.3.63 rmon alarm

<b>Description</b>	RMON Event	
<b>Syntax</b>	rmon event <id> [ log ] [ trap <community> ] { [ description <description> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	description	Specify a description of the event
	log	Generate RMON log when the event fires
	trap	Generate SNMP trap when the event fires

### 3.3.64 terminal

<b>Description</b>	Terminal control	
<b>Syntax</b>	terminal { editing   exec-timeout   help   history   length   width }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	editing	Enable command line editing
	exec-timeout	Set the EXEC timeout
	help	Description of the interactive help system
	history	Control the command history function
	length	Set number of lines on a screen
	width	Set width of the display terminal

### 3.3.65 vlan <vlanid>

<b>Description</b>	Configure VLAN.	
<b>Syntax</b>	vlan <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	Create an empty VLAN index. <b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory

### 3.3.66 vlan <vlanid> <name>

<b>Description</b>	Configure VLAN's name.	
<b>Syntax</b>	vlan <vlanid> <name>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	Create an empty VLAN index. <b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory
	<name>	VLAN Name (0~31) <b>String Size:</b> 0~31 <b>Type:</b> Mandatory

### 3.3.67 vlan disable <vlanid>

<b>Description</b>	Delete VLAN memberset/setting.	
<b>Syntax</b>	vlan disable <vlanid>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlanid>	<b>Valid values:</b> 1 ~ 4094 <b>Type:</b> Mandatory

### 3.3.68 mac address-table aging-time <time>

<b>Description</b>	Configure aging time for a bridge port.	
<b>Syntax</b>	mac address-table aging-time <time>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<time>	<b>Valid values:</b> 10 ~ 1000000 (seconds), 0: disable aging <b>Type:</b> Mandatory

### 3.3.69 mtu <value>

<b>Description</b>	MTU size.
<b>Syntax</b>	mtu <value>

<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<value>	Range. <b>Valid values:</b> 1536~9000 (bytes) <b>Type:</b> Mandatory

### 3.3.70 media-type

<b>Description</b>	Configure media-type	
<b>Syntax</b>	media-type { rj45   sfp   dual }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	rj45	rj45 interface (copper interface).
	sfp	sfp interface (fiber interface).
	dual	Dual media interface (cu & fiber interface).

### 3.3.71 monitor destination interface

<b>Description</b>	The destination port. That is the port that trafficed should be mirrored to.	
<b>Syntax</b>	monitor destination interface <port_type> <port_type_id>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<port_type>	Port type
	<port_type_id>	Port Number

### 3.3.72 monitor source interface

<b>Description</b>	Mirror Interface traffic	
<b>Syntax</b>	monitor source { { interface ( <port_type> [ <v_port_type_list> ] ) } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port_type	1 Gigabit Ethernet Port
	v_port_type_lis	Port list

### 3.3.73 monitor source cpu

<b>Description</b>	Mirror Interface traffic	
<b>Syntax</b>	monitor source { cpu [ <cpu_switch_range> ] } { both   rx   tx }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	both	Setting source port to both will mirror both ingress and egress traffic
	rx	Setting source port to rx will mirror ingress traffic
	tx	Setting source port to tx will mirror egress traffic

### 3.3.74 speed

<b>Description</b>	Configures interface speed. If you use 10, 100, or 1000 keywords with the auto keyword the port will only advertise the specified speeds.	
<b>Syntax</b>	speed { 10g   2500   1000   100   10   auto { [ 10 ] [ 100 ] [ 1000 ] } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1000	1Gbps
	100	100Mbps
	10	10Mbps

	auto	Auto negotiation
	[ 10 ]	10Mbps
	[ 10 0 ]	100Mbps
	[ 1000 ]	1Gbps

### 3.3.75 tacacs-server host

<b>Description</b>	Configure TACACS+ server	
<b>Syntax</b>	tacacs-server host <word1-255> [ port <0-65535> ] [ timeout <1-1000> ] [ key <line1-63> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	word1-255	Hostname or IP address
	0-65535	TCP port number
	1-1000	Wait time in seconds
	line1-63	The shared key

### 3.3.76 tacacs-server key

<b>Description</b>	Configure TACACS+ encryption key	
<b>Syntax</b>	tacacs-server key <line1-63>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	line1-63	

### 3.3.77 tacacs-server timeout

<b>Description</b>	Time to wait for a TACACS+ server to reply	
<b>Syntax</b>	tacacs-server timeout <1-1000>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1-1000	Wait time in seconds

### 3.3.78 traps

<b>Description</b>	trap event configuration	
<b>Syntax</b>	traps [ aaa authentication ] [ system [ coldstart ] [ warmstart ] ] [ switch [ stp ] [ rmon ] ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	aaa authentication	AAA authentication fail event
	coldstart	Cold start event
	warmstart	Warm start event
	stp	STP event
	rmon	RMON event

### 3.3.79 upnp

<b>Description</b>	Set UPnP's configurations	
<b>Syntax</b>	upnp	
<b>Parameter</b>		

### 3.3.80 upnp advertising-duration

<b>Description</b>	Set UPnP's advertising duration	
<b>Syntax</b>	upnp advertising-duration <100-86400>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	100-86400	advertising duration



### 3.3.81 upnp ttl

<b>Description</b>	Set UPnP's TTL value	
<b>Syntax</b>	upnp ttl <1-255>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1-255	TTL value

### 3.3.82 username

<b>Description</b>	User account	
<b>Syntax</b>	username <username> privilege <priv> password encrypted <encry_password> username <username> privilege <priv> password none username <username> privilege <priv> password unencrypted <password>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	username	<Username : word31> User name allows letters, numbers and underscores
	privilege	Set user privilege level
	priv	User privilege level
	password	Specify the password for the user
	encrypted	Specifies an ENCRYPTED password will follow
	none	NULL password
	unencrypted	Specifies an UNENCRYPTED password will follow

### 3.3.83 web

<b>Description</b>		
<b>Syntax</b>	web privilege group <group_name> level { [ cro <cro> ] [ crw <crw> ] [ sro <sro> ] [ srw <srw> ] }*1	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	privilege	Web privilege
	group	Web privilege group
	group_name	Valid words are 'Aggregation' 'DHCP' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow'
	level	Web privilege group level
	cro	Configuration Read-only level
	crw	Configuration Read-write level
	sro	Status/Statistics Read-only level
	srw	Status/Statistics Read-write level
	cro	<Cro : 0-15>
	crw	<Crw : 0-15>
	sro	<Sro : 0-15>
	srw	<Srw : 0-15>

### 3.3.84 flow-control {enable|disable}

<b>Description</b>	Enable/Disable flow-control.
<b>Syntax</b>	flow-control {enable disble}

Parameter		
	Name	Description
	enable	Enable flow-control.
	disable	Disable flow-control.

### 3.3.85 speed

<b>Description</b>	Configure gigabit Ethernet speed and Copper/SFP for gigabit port 7~8. (port1~6 Only support copper, no SFP) (port 9, 10 only support auto)	
<b>Syntax</b>	speed {auto full-1000mbps full-100mbps full-10mbps half-100mbps half-10mbps}	
<b>Parameter</b>		
	Name	Description
	auto	Auto negotiation.
	full-1000mbps	Set 1000Mbps full duplexing.
	full-100mbps	Set 100Mbps full duplexing.
	full-10mbps	Set 10Mbps full duplexing.
	half-100mbps	Set 100Mbps half duplexing.
	half-10mbps	Set 10Mbps half duplexing.

### 3.3.86 port {enable/disable}

<b>Description</b>	Set interface gigabit port enable or disable.	
<b>Syntax</b>	port {enable/disable}	
<b>Parameter</b>		
	Name	Description
	disable	Turn off gigabit port.
	enable	Turn on gigabit port.

### 3.3.87 Date/Time

<b>Description</b>	Set device date and time	
<b>Syntax</b>	clock datetime <2000-2037> <1-12> <1-31> <0-23> <0-59> <0-59>	
<b>Parameter</b>		
	Name	Description
	<2000-2037>	year
	<1-12>	month
	<1-31>	Date
	<0-23>	Hour
	<0-59>	minute
	<0-59>	Second

## 3.4 VLAN Mode Commands

### 3.4.1 vlan

<b>Description</b>	VLAN commands	
<b>Syntax</b>	vlan <vlan_list>	
<b>Parameter</b>		
	Name	Description
	vlan_lis	ISL VLAN IDs 1~4095

### 3.4.2 vlan ethertype s-custom-port

<b>Description</b>	Vlan Ether type for custom S-ports configuration	
<b>Syntax</b>	vlan ethertype s-custom-port <0x0600-0xffff>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	0x0600-0xffff	Ethertype (Range: 0x0600-0xffff)

### 3.4.3 vlan-trunking

<b>Description</b>	Change whether trunking of unknown VLANs is enabled
<b>Syntax</b>	vlan-trunking
<b>Parameter</b>	

### 3.4.4 switchport access vlan

<b>Description</b>	Set switch access mode of the interface	
<b>Syntax</b>	switchport access vlan <vlan_id>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_id	VLAN ID of the VLAN when this port is in access mode

### 3.4.5 switchport forbidden vlan

<b>Description</b>	Adds or removes forbidden VLANs from the current list of forbidden VLANs	
<b>Syntax</b>	switchport forbidden vlan { add   remove } <vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	add	Add to existing list.
	remove	Remove from existing list.
	vlan_list	VLAN IDs

### 3.4.6 switchport hybrid acceptable-frame-type

<b>Description</b>	Set acceptable frame type on a port	
<b>Syntax</b>	switchport hybrid acceptable-frame-type { all   tagged   untagged }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	all	Allow all frames
	tagged	Allow only tagged frames
	untagged	Allow only untagged frames

### 3.4.7 switchport hybrid allowed vlan

<b>Description</b>	Set allowed VLAN characteristics when interface is in hybrid mode	
<b>Syntax</b>	switchport hybrid allowed vlan { all   none   [ add   remove   except ] <vlan_list> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	all	All VLANs
	none	No VLANs
	add	Add VLANs to the current list
	remove	Remove VLANs from the current list
	except	All VLANs except the following
	vlan_list	VLAN IDs of the allowed VLANs when this port is in hybrid mode

### 3.4.8 switchport hybrid egress-tag

<b>Description</b>	Egress VLAN tagging configuration	
<b>Syntax</b>	switchport hybrid egress-tag { none   all [ except-native ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	none	No egress tagging
	all	Tag all frames
	except-native	Tag all frames except frames classified to native VLAN of the hybrid port

### 3.4.9 switchport hybrid ingress-filtering

<b>Description</b>	VLAN Ingress filter configuration
<b>Syntax</b>	switchport hybrid ingress-filtering
<b>Parameter</b>	

### 3.4.10 switchport mode

<b>Description</b>	Set switching mode	
<b>Syntax</b>	switchport mode { access   trunk   hybrid }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	access	Set mode to ACCESS unconditionally
	trunk	Set mode to TRUNK unconditionally
	hybrid	Set mode to HYBRID unconditionall

### 3.4.11 switchport trunk allowed vlan

<b>Description</b>	Set allowed VLAN characteristics when interface is in trunk mode	
<b>Syntax</b>	switchport trunk allowed vlan { all   none   [ add   remove   except ] <vlan_list> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	all	All VLANs
	none	No VLANs
	add	Add VLANs to the current list
	remove	Remove VLANs from the current list
	except	All VLANs except the following
	vlan_list	VLAN IDs of the allowed VLANs when this port is in trunk mode

## 3.5 Interface VLAN Mode Commands

### 3.5.1 interface

<b>Description</b>	Interface configuration	
<b>Syntax</b>	interface <port_type> [ <port_type_list> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	port_type	Port type in Fast, Giga
	port_type_list	List of Port ID, ex, 1/1,3-5;2/2-4,6

### 3.5.2 interface vlan

<b>Description</b>	VLAN interface configurations	
<b>Syntax</b>	interface vlan<vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	List of VLAN interface numbers, 1~4095

### 3.5.3 ip address

<b>Description</b>	IPv4 address configurations	
<b>Syntax</b>	ip address { { <ipv4_addr><ipv4_netmask> }   { dhcp [ fallback <ipv4_addr><ipv4_netmask> [ timeout <uint> ] ] } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ipv4_addr	IP address
	ipv4_netmask	IP netmask
	dhcp	Enable DHCP
	fallback	DHCP fallback settings
	ipv4_addr	DHCP fallback address
	ipv4_netmask	DHCP fallback netmask
	timeout	DHCP fallback timeout
	uint	DHCP fallback timeout in seconds

### 3.5.4 ip name-server

<b>Description</b>	Interface Internet Protocol config commands Domain Name System	
<b>Syntax</b>	ip name-server { <ipv4_ucast>   dhcp [ interface vlan<vlan_id> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ipv4_ucast	A valid IPv4 unicast address
	vlan_id	VLAN identifier(s): VID

### 3.5.5 ip dhcp relay

<b>Description</b>	DHCP relay agent configuration	
<b>Syntax</b>	ipdhcp relay	
<b>Parameter</b>		

### 3.5.6 ip dhcp relay information option

<b>Description</b>	IP DHCP relay information option(Option 82)	
<b>Syntax</b>	ipdhcp relay information option	
<b>Parameter</b>		

### 3.5.7 ip dhcp snooping

<b>Description</b>	IP DHCP snooping	
<b>Syntax</b>	ipdhcp snooping	
<b>Parameter</b>		

### 3.5.8 ip helper-address

<b>Description</b>	DHCP relay server	
<b>Syntax</b>	ip helper-address <v_ipv4_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	Ip : ipv4_ucast	IP address of the DHCP relay server

### 3.5.9 ipv6 address

<b>Description</b>	Configure the IPv6 address of an interface	
<b>Syntax</b>	ipv6 address <ipv6_subnet>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ipv6_subnet	IPv6 prefix x:x::y/z

### 3.5.10 ipv6mtu

<b>Description</b>	IPv6 Maximum transmission unit	
<b>Syntax</b>	ipv6 mtu<1280-1500>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1280-1500	MTU value in bytes

## 3.6 RingV2 Group Mode Commands

### 3.6.1 ringv2 protect

<b>Description</b>	To configure ring protection.	
<b>Syntax</b>	ring protect	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	group1	Configure ring protection v2 group1 (Ring)
	group2	Configure ring protection v2 group2 (Ring)
	group3	Configure ring protection v2 group3 (Chain)

### 3.6.2 guard-time

<b>Description</b>	Set guard time	
<b>Syntax</b>	guard-time { <ringGuardTimerDef> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ringGuardTimerDef	<10-3600>, unit: second. Default is 10 seconds

### 3.6.3 mode

<b>Description</b>	Enable/Disable ring group	
<b>Syntax</b>	mode { disable   enable }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	disable	Set the specified Ring group to Disabled
	enable	Set the specified Ring group to Enabled

### 3.6.4 node1 interface GigabitEthernet <portNo>

<b>Description</b>	Set interface of ring protection node	
<b>Syntax</b>	node1 interface GigabitEthernet <portNo>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	<b>Valid values:</b> 1~max port index.

### 3.6.5 node2 interface GigabitEthernet <portNo>

<b>Description</b>	Set interface of ring protection node	
<b>Syntax</b>	Node2 interface GigabitEthernet <portNo>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<portNo>	<b>Valid values:</b> 1~max port index.

### 3.6.6 role

<b>Description</b>	Set role for group	
<b>Syntax</b>	role { ring-master   ring-slave   coupling-primary   coupling-backup   dual-homing   chain-head   chain-tail   chain-member   b-chain-terminal-1   b-chain-terminal-2   b-chain-central-block   b-chain-member }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ring-master	Set role to ring master
	ring-slave	Set role to ring slave
	coupling-primary	Set role to coupling primary
	coupling-backup	Set role to coupling backup

	dual-homing	Set role to dual homing
	chain-head	Set role to chain head
	chain-member	Set role to chain member
	chain-tail	Set role to chain tail
	b-chain-central-block	Set role to balancing chain central block
	b-chain-member	Set role to balancing chain member
	b-chain-terminal-1	Set role to balancing chain terminal 1
	b-chain-terminal-2	Set role to balancing chain terminal 2

## 3.7 Spanning Tree

### 3.7.1 spanning-tree

<b>Description</b>	Enable/disable STP on this interface	
<b>Syntax</b>	spanning-tree	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.7.2 spanning-tree aggregation

<b>Description</b>	Spanning Tree protocol	
<b>Syntax</b>	spanning-tree aggregation	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.7.3 spanning-tree auto-edge

<b>Description</b>	Auto detect edge status	
<b>Syntax</b>	<b>3.7.4 spanning-tree auto-edge</b>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.7.5 spanning-tree bpdu-guard

<b>Description</b>	Enable/disable BPDU guard	
<b>Syntax</b>	spanning-tree bpdu-guard	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.7.6 spanning-tree edge

<b>Description</b>	Edge port	
	spanning-tree	
	STP Bridge	
<b>Syntax</b>	spanning-tree edge	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.7.7 spanning-tree edge bpdu-filter

<b>Description</b>	Enable BPDU filter (stop BPDU tx/rx)	
<b>Syntax</b>	spanning-tree edge bpdu-filter	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>



### 3.7.8 spanning-tree mode

<b>Description</b>	mode  STP protocol mode  stp  802.1D Spanning Tree  rstp  Rapid Spanning Tree (802.1w)  mstp  Multiple Spanning Tree (802.1s)	
<b>Syntax</b>	spanning-tree mode { stp   rstp   mstp }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	stp	802.1D Spanning Tree
	rstp	Rapid Spanning Tree (802.1w)
	mstp	Multiple Spanning Tree (802.1s)

### 3.7.9 spanning-tree mst cost

<b>Description</b>	STP bridge instance STP Cost of this port	
<b>Syntax</b>	spanning-tree mst <0-7> cost { <1-200000000>   auto }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<1-200000000>	STP Cost of this port

### 3.7.10 spanning-tree mst port-priority

<b>Description</b>	port-priority	
<b>Syntax</b>	spanning-tree mst <0-7> port-priority <0-240>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<0-240>	STP priority of this port

### 3.7.11 spanning-tree mst priority

<b>Description</b>	Priority of the instance  Range in seconds	
<b>Syntax</b>	spanning-tree mst <0-7> priority <0-61440>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<0-61440>	Priority of the instance

### 3.7.12 spanning-tree mst vlan

<b>Description</b>	VLAN keyword	
<b>Syntax</b>	spanning-tree mst <0-7> vlan <vlan_list>	
<b>Parameter</b>		

	Name	Description
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<vlan_list>	Range of VLANs

### 3.7.13 spanning-tree mst forward-time

<b>Description</b>	forward-time  Delay between port states	
<b>Syntax</b>	spanning-tree mst forward-time <4-30>	
<b>Parameter</b>		
	Name	Description
	<4-30>	Delay between port states

### 3.7.14 spanning-tree mst max-age

<b>Description</b>	Max bridge age before timeout.	
<b>Syntax</b>	spanning-tree mst max-age <6-40> [ forward-time <4-30> ]	
<b>Parameter</b>		
	Name	Description
	<6-40>	Max bridge age before timeout
	<4-30>	forward-time

### 3.7.15 spanning-tree mst max-hops

<b>Description</b>	MSTP bridge max hop count	
<b>Syntax</b>	spanning-tree mst max-hops <6-40>	
<b>Parameter</b>		
	Name	Description
	<6-40>	MSTP bridge max hop count

### 3.7.16 spanning-tree mst name

<b>Description</b>	Name of the bridge  Revision  Revision keyword	
<b>Syntax</b>	spanning-tree mst name <word32> revision <0-65535>	
<b>Parameter</b>		
	Name	Description
	<word32>	Name of the bridge
	<0-65535>	Revision keyword

### 3.7.17 spanning-tree mst <instance>

<b>Description</b>	instance 0-7 (CIST=0, MST2=1...)	
<b>Syntax</b>	spanning-tree mst <instance> priority <prio> spanning-tree mst <instance> vlan <v_vlan_list>	
<b>Parameter</b>		
	Name	Description
	instance	<Instance : 0-7> instance 0-7 (CIST=0, MST2=1...)
	priority	Priority of the instance
	vlan	VLAN keyword
	prio	<Prio : 0-61440> Range in seconds
	v_vlan_list	<vlan_list> Range of VLANs

### 3.7.18 spanning-tree recovery

<b>Description</b>	Recovery	
<b>Syntax</b>	spanning-tree recovery interval <interval>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	interval	The interval
	interva	Interval : 30-86400> Range in seconds

### 3.7.19 spanning-tree transmit

<b>Description</b>	Transmit	
<b>Syntax</b>	spanning-tree transmit hold-count <holdcount>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	hold-count	Max number of transmit BPDUs per sec
	holdcount	<Holdcount : 1-10> 1-10 per sec, 6 is default

## 3.8 SNMP Configure Command

### 3.8.1 snmp-server

<b>Description</b>	Enable SNMP server	
<b>Syntax</b>	snmp-server	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.8.2 snmp-server access

<b>Description</b>	snmp-server access configuration	
<b>Syntax</b>	snmp-server access < group name > model { v1   v2c   v3   any } level { auth   noauth   priv } [ read <word255> ] [ write <word255> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< group name >	32 words
	< v1   v2c   v3   any >	V1~v3 security model
	< level >	security level
	{ auth   noauth   priv }	authNoPriv Security Level
		noAuthNoPriv Security Level
		authPriv Security Level
	read	specify a read view for the group
	<word255>	read view name

### 3.8.3 snmp-server community v2c

<b>Description</b>	Set the SNMP v2c community	
<b>Syntax</b>	snmp-server community v2c <word127> [ ro   rw ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word127 >	Community word
	< ro >	Read only
	<rw>	Read write

### 3.8.4 snmp-server community v3

<b>Description</b>	S Set the SNMP v3 community	
<b>Syntax</b>	snmp-server community v3 <word127> [ <ipv4_addr> <ipv4_netmask> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word127 >	Community word
	< ipv4_addr >	IPv4 address

	<ipv4_netmask>	IPv4 netmask
--	----------------	--------------

### 3.8.5 snmp-server host

<b>Description</b>	Set SNMP server's configurations	
<b>Syntax</b>	snmp-server host <word32>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word32 >	Name of the host configuration

### 3.8.6 snmp-server host traps

<b>Description</b>	Set SNMP host's configurations	
<b>Syntax</b>	snmp-server host < Name of the host configuration > traps [ linkup ] [ linkdown ] [ lldp ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< Name of the host configuration >	Name of the host configuration
	<200-1468>	packet byte
	[ linkup ]	Link up event
	[ linkdown ]	Link down event
	[ lldp ]	LLDP event

### 3.8.7 snmp-server trap

<b>Description</b>	Set SNMP server's configurations	
<b>Syntax</b>	snmp-server trap	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.8.8 snmp-server user

<b>Description</b>	Set the SNMPv3 user's configurations	
<b>Syntax</b>	snmp-server user <Username> engine-id <Engine ID octet string> [ { md5 <word8-32>   sha <word8-40> } [ priv { des   aes } <word8-32> ] ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<Username >	32 words
	<Engine ID octet string>	word10-32
	MD5	Set MD5 protocol
	sha	Set SHA protocol
	<word8-40>	SHA password
	priv	Set Privacy
	{ des   aes }	Set DES/AES protocol
	<word8-32>	Set privacy password

### 3.8.9 snmp-server version

<b>Description</b>	Set the SNMP server's version	
<b>Syntax</b>	snmp-server version { v1   v2c   v3 }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	{ v1   v2c   v3 }	SNMP v1,v2c,v3

### 3.8.10 snmp-server view

<b>Description</b>	Snmp MIB view configuration	
<b>Syntax</b>	snmp-server view <word32> <word255> { include   exclude }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< word32 >	MIB view name
	< word255>	MIB view OID
	{ include   exclude }	Included/Excluded type from the view

### 3.8.11 SNMP trap receive ipv6 host

<b>Description</b>	host configuration	
<b>Syntax</b>	host <ipv6_ucast> [ <1-65535> ] [ traps   informs ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	ipv6_ucast	IP address of SNMP trap host
	1-65535	UDP port of the trap messages
	traps	Send Trap messages to this host
	informs	Send Inform messages to this host

### 3.8.12 snmp-server contact

<b>Description</b>	SNMP server contact	
<b>Syntax</b>	snmp-server contact <v_line255>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_line255	<line255> contact string

### 3.8.13 snmp-server engine-id

<b>Description</b>	SNMP server engine ID	
<b>Syntax</b>	snmp-server engine-id local <engineID>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	local	Set SNMP local engine ID
	engineID	<Engineid : word10-32> local engine ID

### 3.8.14 snmp-server location

<b>Description</b>	SNMP server location	
<b>Syntax</b>	snmp-server location <v_line255>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_line255	<line255> location string

### 3.8.15 snmp-server security-to-group

<b>Description</b>	SNMP server security	
<b>Syntax</b>	snmp-server security-to-group model { v1   v2c   v3 } name <security_name> group <group_name>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	model	security model
	v1	v1 security model
	v2c	v2c security model
	v3	v3 security model
	name	security user
	security_name	<SecurityName : word32> security user name
	group	security group
	group_name	<GroupName : word32> security group name

### 3.8.16 SNMP trap receive ipv4 host

<b>Description</b>	host configuration	
<b>Syntax</b>	host { <ipv4_ucast>   <hostname> } [ <1-65535> ] [ traps   informs ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

	ipv4_ucast	IP address of SNMP trap host
	hostname	hostname of SNMP trap host
	1-65535	UDP port of the trap messages
	traps	Send Trap messages to this host
	informs	Send Inform messages to this host

## 3.9 Qos Function Command

### 3.9.1 qos qce

<b>Description</b>	QCE setting	
<b>Syntax</b>	qos qce { <Id : 1-256>   refresh   update }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<Id : 1-256>	QCE ID
	refresh	Refresh QCE tables in hardware
	update	Update an existing QCE

### 3.9.2 qos storm

<b>Description</b>	QoS storm	
<b>Syntax</b>	qos storm { unicast   multicast   broadcast } { { <rate> [ kfps ] }   { 1024 kfps } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	broadcast	Police broadcast frames
	multicast	Police multicast frames
	unicast	Police unicast frames
	<rate>	1024, Rate is 1024 kfps <Rate : 1,2,4,8,16,32,64,128,256,512> Policer rate (default fps)

### 3.9.3 qos cos

<b>Description</b>	Class of service configuration	
<b>Syntax</b>	qos cos <0-7>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0-7>	Specific class of service

### 3.9.4 qos dscp-classify

<b>Description</b>	Set qos dscp-classify.	
<b>Syntax</b>	qos dscp-classify { zero   selected   any }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.9.5 qos dscp-remark

<b>Description</b>	Set qos dscp-remark	
<b>Syntax</b>	qos dscp-remark { rewrite   remap   remap-dp }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.9.6 qos dscp-translate

<b>Description</b>	Enable qos dscp-translate mode	
<b>Syntax</b>	qos dscp-translate	

### 3.9.7 qos map cos-dscp

<b>Description</b>	Configure cos mapping to dscptable	
<b>Syntax</b>	qos map cos-dscp <0~7> dpl <0~1> dscp { <0-63>   { be   af11   af12	

	af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~7>	Cos level
	<0~1>	Specific drop precedence level
	<0-63>	Dscp level
	be	Default PHB(DSCP 0) for best effort traffic
	af11~13	Assured Forwarding PHB 11~13(DSCP 10,12,14)
	af22~23	Assured Forwarding PHB 22~23(DSCP 20,22)
	af31~33	Assured Forwarding PHB 31~33(DSCP 26,28,30)
	Af41~43	Assured Forwarding PHB 41~43(DSCP 34,36,38)
	cs1~7	Class Selector PHB CS1~7 precedence 1~7(DSCP 8*(cs value))
	ef	Expedited Forwarding PHB(DSCP 46)
	va	Voice Admit PHB(DSCP 44)

### 3.9.8 qos map cos-dscp

<b>Description</b>	Configure dscp mapping to cos table	
<b>Syntax</b>	qos map dscp-cos { <0~63>   { be   af11   af12   af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } } cos <0-7> dpl <dpl>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~7>	Cos level
	<0-63>	Dscp level
	be	Default PHB(DSCP 0) for best effort traffic
	af11~13	Assured Forwarding PHB 11~13(DSCP 10,12,14)
	af22~23	Assured Forwarding PHB 22~23(DSCP 20,22)
	af31~33	Assured Forwarding PHB 31~33(DSCP 26,28,30)
	Af41~43	Assured Forwarding PHB 41~43(DSCP 34,36,38)
	cs1~7	Class Selector PHB CS1~7 precedence 1~7(DSCP 8*(cs value))
	ef	Expedited Forwarding PHB(DSCP 46)
	va	Voice Admit PHB(DSCP 44)
	<0~1>	Specific drop precedence level

### 3.9.9 qos map dscp-egress-translation

<b>Description</b>	Configure dscp egress-translation	
<b>Syntax</b>	qos map dscp-egress-translation { <0~63>   { be   af11   af12   af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } } <0~1> to { <0-63>   { be   af11   af12   af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~7>	Cos level

	<0-63>	Dscp level
	be	Default PHB(DSCP 0) for best effort traffic
	af11~13	Assured Forwarding PHB 11~13(DSCP 10,12,14)
	af22~23	Assured Forwarding PHB 22~23(DSCP 20,22)
	af31~33	Assured Forwarding PHB 31~33(DSCP 26,28,30)
	Af41~43	Assured Forwarding PHB 41~43(DSCP 34,36,38)
	cs1~7	Class Selector PHB CS1~7 precedence 1~7(DSCP 8*(cs value))
	ef	Expedited Forwarding PHB(DSCP 46)
	va	Voice Admit PHB(DSCP 44)
	<0~1>	Specific drop precedence level

### 3.9.10 qos map dscp-ingress-translation

<b>Description</b>	Configure dscp ingress-translation	
<b>Syntax</b>	qos map dscp-ingress-translation { <0~63>   { be   af11   af12   af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } } to { <0-63>   { be   af11   af12   af13   af21   af22   af23   af31   af32   af33   af41   af42   af43   cs1   cs2   cs3   cs4   cs5   cs6   cs7   ef   va } }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~7>	Cos level
	<0-63>	Dscp level
	be	Default PHB(DSCP 0) for best effort traffic
	af11~13	Assured Forwarding PHB 11~13(DSCP 10,12,14)
	af22~23	Assured Forwarding PHB 22~23(DSCP 20,22)
	af31~33	Assured Forwarding PHB 31~33(DSCP 26,28,30)
	Af41~43	Assured Forwarding PHB 41~43(DSCP 34,36,38)
	cs1~7	Class Selector PHB CS1~7 precedence 1~7(DSCP 8*(cs value))
	ef	Expedited Forwarding PHB(DSCP 46)
	va	Voice Admit PHB(DSCP 44)
	<0~1>	Specific drop precedence level

### 3.9.11 qos policer

<b>Description</b>	Configure qos policer	
<b>Syntax</b>	qos policer <unit> [ fps ] [ flowcontrol ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< unit >	Traffic meter
	< fps >	Frame rate
	[ flowcontrol ]	Enable flowcontrol mode

### 3.9.12 qos wrr

<b>Description</b>	Specifies qos wrr mode	
<b>Syntax</b>	qos wrr <1-100> <1-100> <1-100> <1-100> <1-100> <1-100>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>



	<1-100>	every level proportion

### 3.9.13 qos queue-shaper

<b>Description</b>	Configure queue-shaper command	
<b>Syntax</b>	qos queue-shaper queue <0~7> <uint> [ excess ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-100>	every level proportion
	<uint>	Traffic meter
	[ excess ]	Agree the shaper could be excess or not

### 3.9.14 qos queue-policer

<b>Description</b>	Configure queue-policer command	
<b>Syntax</b>	qos queue-policer queue <0~7> <uint>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0~7>	Queue number
	<uint>	Traffic meter

### 3.9.15 qos shaper <unit>

<b>Description</b>	Configure qos shaper command	
<b>Syntax</b>	qos shaper <uint>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-100>	every level proportion
	<unit>	Traffic meter

## 3.10 IGMP Functional Commands

### 3.10.1 ip igmp host-proxy [ leave-proxy ]

<b>Description</b>	IGMP proxy for leave configuration	
<b>Syntax</b>	ip igmp host-proxy [ leave-proxy ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	leave-proxy	IGMP proxy for leave

### 3.10.2 ip igmp snooping

<b>Description</b>	Snooping igmp	
<b>Syntax</b>	ip igmp snooping	
<b>Parameter</b>		

### 3.10.3 ip igmp snooping immediate-leave

<b>Description</b>	IP IGMP snooping immediate leave configuration	
<b>Syntax</b>	ip igmp snooping immediate-leave	
<b>Parameter</b>		

### 3.10.4 ip igmp snooping last-member-query-interval

<b>Description</b>	IP IGMP snooping Last Member Query Interval in tenths of seconds	
<b>Syntax</b>	ip igmp snooping last-member-query-interval <0-31744>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	0-31744	0 - 31744 tenths of seconds

### 3.10.5 ip igmp snooping max-groups

<b>Description</b>	IGMP group throttling configuration	
<b>Syntax</b>	ip igmp snooping max-groups <1-10>	

Parameter	Name	Description
	1-10	Maximum number of IGMP group registration

### 3.10.6 ip igmp snooping mrouter

<b>Description</b>	IP IGMP snooping Multicast router port configuration	
<b>Syntax</b>	ip igmp snooping mrouter	
<b>Parameter</b>		

### 3.10.7 ip igmp snooping querier

<b>Description</b>	IP IGMP querier configuration	
<b>Syntax</b>	ip igmp snooping querier { election   address <ipv4_ucast> }	
<b>Parameter</b>		
	Name	Description
	election	Act as an IGMP Querier to join Querier-Election
	address	IGMP Querier address configuration
	ipv4_ucast	A valid IPv4 unicast address

### 3.10.8 ip igmp snooping query-interval

<b>Description</b>	IP IGMP snooping Query-Interval in seconds	
<b>Syntax</b>	ip igmp snooping query-interval <1-31744>	
<b>Parameter</b>		
	Name	Description
	1-317	1 - 31744 seconds

### 3.10.9 ip igmp snooping vlan

<b>Description</b>	ipigmp snooping vlan IDs	
<b>Syntax</b>	ip igmp snooping vlan<vlan_list>	
<b>Parameter</b>		
	Name	Description
	vlan_list	VLAN identifier(s): VID

### 3.10.10 ip igmp ssm-range

<b>Description</b>	SSM range	
<b>Syntax</b>	ip igmp ssm-range <v_ipv4_mcast> <ipv4_prefix_length>	
<b>Parameter</b>		
	Name	Description
	v_ipv4_mcast	Valid IPv4 multicast address
	ipv4_prefix_length	Length

### 3.10.11 ip igmp unknown-flooding

<b>Description</b>	IP IGMP flooding unregistered IPv4 multicast traffic	
<b>Syntax</b>	ip igmp unknown-flooding	
<b>Parameter</b>		

### 3.10.12 clear ip igmp snooping statistics

<b>Description</b>	clear ip igmp snooping statistics	
<b>Syntax</b>	clear ip igmp snooping [ vlan<vlan_list> ] statistics	
<b>Parameter</b>		
	Name	Description
	vlan_list	VLAN list.

## 3.11 MVR Functional Commands

### 3.11.1 mvr

<b>Description</b>	Multicast VLAN Registration configuration	
<b>Syntax</b>	mvr	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.11.2 mvr immediate-leave

<b>Description</b>	mvr immediate leave configuration	
<b>Syntax</b>	mvr immediate-leave	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>

### 3.11.3 mvr name channel

<b>Description</b>	Multicast VLAN name and channel configuration	
<b>Syntax</b>	mvr name <word16> channel <word16>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	name <word16>	MVR multicast VLAN name
	channel <word16>	Profile name in 16 char's

### 3.11.4 mvr frame priority

<b>Description</b>	Multicast VLAN interface CoS priority	
<b>Syntax</b>	mvr name <word16> frame priority <0-7>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	name <word16>	MVR multicast VLAN name
	priority <0-7>	CoS priority ranges from 0 to 7

### 3.11.5 mvr name <word16> frame tagged

<b>Description</b>	MVR control frame in TX, Tagged IGMP/MLD frames will be sent	
<b>Syntax</b>	mvr name <word16> frame tagged	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	name <word16>	MVR multicast VLAN name

### 3.11.6 mvr name <word16> igmp-address <ipv4\_ucast>

<b>Description</b>	MVR address configuration used in IGMP	
<b>Syntax</b>	mvr name <word16> igmp-address <ipv4_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	name <word16>	MVR multicast VLAN name
	<ipv4_ucast>	A valid IPv4 unicast address

### 3.11.7 mvr name <word16> last-member-query-interval <0-31744>

<b>Description</b>	Configure last Member Query Interval in tenths of seconds	
<b>Syntax</b>	mvr name <word16> last-member-query-interval <0-31744>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	name <word16>	MVR multicast VLAN name
	<0-31744>	0 - 31744 tenths of seconds

### 3.11.8 mvr name <word16> mode

<b>Description</b>	Dynamic MVR operation mode	
<b>Syntax</b>	mvr name <word16> mode { dynamic   compatible }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	dynamic	Dynamic MVR operation mode

	compatible	Compatible MVR operation mode
--	------------	-------------------------------

### 3.11.9 mvr name <word16> type

<b>Description</b>	MVR port role configuration	
<b>Syntax</b>	mvr name <word16> type { source   receiver }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	source	MVR source port
	receiver	MVR receiver port

### 3.11.10 mvr vlan

<b>Description</b>	Multicast VLAN Registration configuration	
<b>Syntax</b>	mvr vlan <vlan_list> [ name <word16> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list
	name <word16>	MVR multicast VLAN name in 16 char's

### 3.11.11 mvr vlan <vlan\_list> channel

<b>Description</b>	MVR channel configuration	
<b>Syntax</b>	mvr vlan <vlan_list> channel <word16>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list
	channel <word16>	MVR multicast channel name in 16 char's

### 3.11.12 mvr vlan <vlan\_list> frame priority

<b>Description</b>	Interface CoS priority	
<b>Syntax</b>	mvr vlan <vlan_list> frame priority <0-7>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list
	<0-7>	CoS priority ranges from 0 to 7

### 3.11.13 mvr vlan <vlan\_list> frame tagged

<b>Description</b>	Set tagged IGMP/MLD frames will be sent	
<b>Syntax</b>	mvr vlan <vlan_list> frame tagged	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list

### 3.11.14 mvr vlan <vlan\_list> igmp-address

<b>Description</b>	Set tagged IGMP/MLD frames will be sent	
<b>Syntax</b>	mvr vlan <vlan_list> igmp-address <ipv4_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list
	<ipv4_ucast>	A valid IPv4 unicast address for IGMP

### 3.11.15 mvr vlan <vlan\_list> mode

<b>Description</b>	Dynamic MVR vlan operation mode	
<b>Syntax</b>	mvr vlan <vlan_list> mode { dynamic   compatible }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< vlan_list >	MVR multicast VLAN list
	dynamic	Dynamic MVR operation mode
	compatible	Compatible MVR operation mode

### 3.11.16 mvr vlan <vlan\_list> type

<b>Description</b>	MVR vlan role configuration	
<b>Syntax</b>	mvr vlan <vlan_list> type { source   receiver }	

Parameter		
	Name	Description
	< vlan_list >	MVR multicast VLAN list
	source	MVR source port
	receiver	MVR receiver port

## 3.12 MLD Functional Commands

### 3.12.1 ipv6 mld host-proxy

<b>Description</b>	IPv6 MLD proxy configuration	
<b>Syntax</b>	ipv6 mld host-proxy [ leave-proxy ]	
<b>Parameter</b>		
	Name	Description
	leave-proxy	MLD proxy for leave configuration

### 3.12.2 ipv6 mld snooping

<b>Description</b>	ipv6 mld snooping
<b>Syntax</b>	ipv6 mld snooping
<b>Parameter</b>	

### 3.12.3 ipv6 mld snooping compatibility

<b>Description</b>	IPv6 MLD snooping compatibility configuration	
<b>Syntax</b>	ipv6 mld snooping compatibility { auto   v1   v2 }	
<b>Parameter</b>		
	Name	Description
	auto	Compatible with MLDv1/MLDv2
	v1	Forced MLDv1
	v2	Forced MLDv2

### 3.12.4 ipv6 mld snooping immediate-leave

<b>Description</b>	IPv6 MLD snooping immediate-leave configuration
<b>Syntax</b>	ipv6 mld snooping immediate-leave
<b>Parameter</b>	

### 3.12.5 ipv6 mld snooping last-member-query-interval

<b>Description</b>	ipv6 mld snooping last member query interval in tenths of seconds	
<b>Syntax</b>	ipv6 mld snooping last-member-query-interval <0-31744>	
<b>Parameter</b>		
	Name	Description
	0-31744	0 - 31744 tenths of seconds

### 3.12.6 ipv6 mld snooping max-groups

<b>Description</b>	IPv6 MLD group throttling configuration	
<b>Syntax</b>	ipv6 mld snooping max-groups <1-10>	
<b>Parameter</b>		
	Name	Description
	1-10	Maximun number of MLD group registration

### 3.12.7 ipv6 mld snooping mrouter

<b>Description</b>	ipv6 mld snooping multicast router port configuration	
<b>Syntax</b>	ipv6 mld snooping mrouter	
<b>Parameter</b>		

### 3.12.8 ipv6 mld snooping query-interval

<b>Description</b>	IPv6 MLD snooping query interval in seconds	
<b>Syntax</b>	ipv6 mld snooping query-interval <1-31744>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1-31744	1 - 31744 seconds

### 3.12.9 ipv6 mld snooping query-max-response-time

<b>Description</b>	IPv6 MLD snooping querymaxresponse interval in tenths of seconds	
<b>Syntax</b>	ipv6 mld snooping query-max-response-time <0-31744>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	0-31744	0 - 31744 tenths of seconds

### 3.12.10 ipv6 mld snooping vlan

<b>Description</b>	ipv6 mld snooping vlan	
<b>Syntax</b>	ipv6 mld snooping vlan<vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	VLAN identifier(s): VID

### 3.12.11 ipv6 mld ssm-range

<b>Description</b>	SSM range	
<b>Syntax</b>	ipv6 mld ssm-range <v_ipv6_mcast> <ipv6_prefix_length>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_ipv6_mcast	Valid IPv6 multicast address
	ipv6_prefix_length	length

### 3.12.12 ipv6 mld unknown-flooding

<b>Description</b>	Flooding unregistered IPv6 multicast traffic	
<b>Syntax</b>	ipv6 mld unknown-flooding	
<b>Parameter</b>		

### 3.12.13 ipv6 route

<b>Description</b>	IPv6 Route	
<b>Syntax</b>	ipv6 route <v_ipv6_subnet> { <v_ipv6_ucast>   interface vlan <v_vlan_id> <v_ipv6_addr> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	v_ipv6_subnet	IPv6 prefix x:x::y/z
	v_ipv6_ucast	IP address of the DHCP relay server
	v_vlan_id	VLAN ID
	v_ipv6_addr	IP address

### 3.13 Authenticate Mode Commands

#### 3.13.1 radius-server attribute 32

<b>Description</b>	Configure radius-server attribute	
<b>Syntax</b>	radius-server attribute 32 <id>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	id	Id : line1-253

#### 3.13.2 radius-server attribute 4

<b>Description</b>	Configure radius-server attribute	
<b>Syntax</b>	radius-server attribute 4 <ipv4_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<ipv4_ucast>	ipv4_ucast address

#### 3.13.3 radius-server attribute 95

<b>Description</b>	Configure radius-server attribute	
<b>Syntax</b>	radius-server attribute 95 <ipv6_ucast>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<ipv6_ucast>	Ipv6_ucast address

#### 3.13.4 radius-server deadline

<b>Description</b>	Configure radius-server deadline	
<b>Syntax</b>	radius-server deadline <1-1440>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-1440>	Time in minutes

#### 3.13.5 radius-server host [ auth-port ] [ acct-port ] [ timeout ] [ retransmit ] [ key ]

<b>Description</b>	Configure radius-server host behavior	
<b>Syntax</b>	radius-server host <word1-255> [ auth-port <0-65535> ] [ acct-port <0-65535> ] [ timeout <1-1000> ] [ retransmit <1-1000> ] [ key <line1-63> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word1-255>	Hostname or IP address
	auth-port <0-65535>	UDP port number for RADIUS authentication server
	acct-port <0-65535>	UDP port number for RADIUS accounting server
	timeout <1-1000>	Wait time in seconds for this RADIUS server to reply (overrides default)
	retransmit <1-1000>	

#### 3.13.6 radius -server key

<b>Description</b>	radius-server key	
<b>Syntax</b>	radius-server key <key>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	key	<Key : line1-63> The shared key

### 3.13.7 radius-server retransmit

<b>Description</b>	radius-server retransmit	
<b>Syntax</b>	radius-server retransmit <retries>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	retries	<Retries : 1-1000> Number of retries for a transaction

### 3.13.8 radius-server timeout

<b>Description</b>	radius-server timeout	
<b>Syntax</b>	radius-server timeout <seconds>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	seconds	<Seconds : 1-1000> Wait time in second

### 3.13.9 tacacs-server deadtime <1-1440>

<b>Description</b>	Time to stop using a TACACS+ server that doesn't respond	
<b>Syntax</b>	tacacs-server deadtime <1-1440>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< <1-1440>	Time in minutes

### 3.13.10 tacacs-server host [ auth-port ] [ timeout ] [ key]

<b>Description</b>	Configure tacacs-server host behavior	
<b>Syntax</b>	tacacs-server host <word1-255> [ port <0-65535> ] [ timeout <1-1000> ] [ key <line1-63> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< <1-1440>	TCP port number

### 3.13.11 tacacs-server deadtime <1-1440>

<b>Description</b>	Time to stop using a TACACS+ server that doesn't respond	
<b>Syntax</b>	tacacs-server deadtime <1-1440>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< <1-1440>	Time in minutes

### 3.13.12 tacacs-server deadtime <1-1440>

<b>Description</b>	Time to stop using a TACACS+ server that doesn't respond	
<b>Syntax</b>	tacacs-server deadtime <1-1440>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	< <1-1440>	Time in minutes

### 3.13.13 dot1x feature

<b>Description</b>	Globally enables/disables a dot1x feature functionality	
<b>Syntax</b>	dot1x feature { [ guest-vlan ] [ radius-qos ] [ radius-vlan ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	guest-vlan	Globally enables/disables state of guest-vlan
	radius-qos	Globally enables/disables state of RADIUS-assigned QoS.
	radius-vlan	Globally enables/disables state of RADIUS-assigned VLAN.



### 3.13.14 dot1x authentication timer

<b>Description</b>	dot1x authentication timer	
<b>Syntax</b>	dot1x authentication timer { inactivity <v_10_to_100000> }   { re-authenticate <v_1_to_3600> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	inactivity	Time in seconds between check for activity on successfully authenticated MAC addresses
	re-authenticate	The period between re-authentication attempts in seconds

### 3.13.15 dot1x max-reauth-req

<b>Description</b>	Max value of authentication request	
<b>Syntax</b>	dot1x max-reauth-req <1-255>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-255>	number of times

### 3.13.16 dot1x re-authentication

<b>Description</b>	re-authentication	
<b>Syntax</b>	dot1x re-authentication	
<b>Parameter</b>		

### 3.13.17 dot1x system-auth-control

<b>Description</b>	System authentication control	
<b>Syntax</b>	dot1x system-auth-control	
<b>Parameter</b>		

### 3.13.18 dot1x timeout

<b>Description</b>	Timeout control	
<b>Syntax</b>	dot1x timeout { quiet-period <v_10_to_1000000> }   { tx-period <v_1_to_65535> }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	quiet-period	Time in seconds before a MAC-address that failed authentication gets a new authentication chance
	tx-period	the time between EAPOL retransmissions

### 3.13.19 dot1x guest-vlan

<b>Description</b>	G Enables/disables Guest VLAN globally or on one or more ports	
<b>Syntax</b>	dot1x guest-vlan dot1x guest-vlan<1-4095>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-4095>	Guest VLAN ID used when entering the Guest VLAN.

### 3.13.20 dot1x initialize

<b>Description</b>	Forces a reinitialization of the clients on the port and thereby a reauthentication immediately.	
<b>Syntax</b>	dot1x initialize [ interface <port_type> [ <port_type_list> ] ]	
<b>Parameter</b>		

	Name	Description
	<port_type>	Port type in Fast, Giga or Tengigaethernet
	<port_type_list>	List of Port ID, ex, 1/1,3-5;2/2-4,6

### 3.13.21 dot1x port-control

<b>Description</b>	Sets the port security state.	
<b>Syntax</b>	dot1x port-control { force-authorized   force-unauthorized   auto   single   multi   mac-based }	
<b>Parameter</b>		
	Name	Description
	force-authorized	Port access is allowed
	force-unauthorized	Port access is not allowed
	auto	Port-based 802.1X Authentication
	single	Single Host 802.1X Authentication
	multi	Multiple Host 802.1X Authentication
	mac-based	Switch authenticates on behalf of the client

### 3.13.22 dot1x radius-vlan

<b>Description</b>	Enables/disables per-port state of RADIUS-assigned VLAN.
<b>Syntax</b>	dot1x radius-vlan
<b>Parameter</b>	

### 3.13.23 show radius-server [ statistics ]

<b>Description</b>	show radius-server statistics	
<b>Syntax</b>	show radius-server [ statistics ]	
<b>Parameter</b>		
	Name	Description
	[ statistics ]	Count radius packet statistics

### 3.13.24 enable

<b>Description</b>	Privilege level control	
<b>Syntax</b>	Enable { password [ level <priv> ] <password> }   { secret { 0   5 } [ level <priv> ] <password> }	
<b>Parameter</b>		
	Name	Description
	password	Assign the privileged level clear password
	secret	Assign the privileged level secret

### 3.13.25 end

<b>Description</b>	Level exit
<b>Syntax</b>	end
<b>Parameter</b>	

### 3.13.26 exit

<b>Description</b>	Level exit
<b>Syntax</b>	end
<b>Parameter</b>	

### 3.13.27 hostname

<b>Description</b>	This system's network name
<b>Syntax</b>	hostname <hostname>
<b>Parameter</b>	

## 3.14 Loop-Protection Configure commands

### 3.14.1 loop-protect

<b>Description</b>	Loop protection configuration on port
<b>Syntax</b>	loop-protect
<b>Parameter</b>	

### 3.14.2 loop-protect action

<b>Description</b>	Loop protection configuration on port	
<b>Syntax</b>	loop-protect action { [ shutdown ] [ log ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	shutdown	Shutdown port
	log	Generate log

### 3.14.3 loop-protect shutdown-time

<b>Description</b>	Loop protection shutdown time interval	
<b>Syntax</b>	loop-protect shutdown-time <0-604800>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	0-604800	Shutdown time in second

### 3.14.4 loop-protect transmit-time

<b>Description</b>	Loop protection transmit time interval	
<b>Syntax</b>	loop-protect transmit-time <1-10>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1-10	Transmit time in second

### 3.14.5 loop-protect tx-mode

<b>Description</b>	Loop protection actively generate PDUs
<b>Syntax</b>	loop-protect tx-mode
<b>Parameter</b>	

## 3.15 LLDP Configure commands

### 3.15.1 lldp holdtime

<b>Description</b>	Sets LLDP hold time (The neighbor switch will discarded the LLDP information after \"hold time\" multiplied with \"timer\" seconds ).	
<b>Syntax</b>	lldp holdtime <2-10>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<2-10>	Holdtime 2-10 seconds

### 3.15.2 lldp med

<b>Description</b>	LLDP MED	
<b>Syntax</b>	See Description	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	datum	Datum (geodetic system) type
		nad83-mllw Mean lower low water datum

		1983										
		nad83-navd88 North American vertical datum 1983										
		wgs84 World Geodetic System 1984										
	fast	Number of times to repeat LLDP frame transmission at fast start  <v_1_to_10> : <1-10>										
	location-tlv	LLDP-MED Location Type Length Value parameter  <table border="1"> <tr> <td>altitude</td> <td>Altitude parameter</td> </tr> <tr> <td>civic-addr</td> <td>Civic address information and postal information</td> </tr> <tr> <td>elin-addr</td> <td>Emergency Location Identification Number, (e.g. E911 and others), such as defined by TIA or NENA.</td> </tr> <tr> <td>latitude</td> <td>Latitude parameter</td> </tr> <tr> <td>longitude</td> <td>Longitude parameter</td> </tr> </table>	altitude	Altitude parameter	civic-addr	Civic address information and postal information	elin-addr	Emergency Location Identification Number, (e.g. E911 and others), such as defined by TIA or NENA.	latitude	Latitude parameter	longitude	Longitude parameter
altitude	Altitude parameter											
civic-addr	Civic address information and postal information											
elin-addr	Emergency Location Identification Number, (e.g. E911 and others), such as defined by TIA or NENA.											
latitude	Latitude parameter											
longitude	Longitude parameter											
	media-vlan-policy	Use the media-vlan-policy to create a policy, which can be assigned to an interface  <Index : 0-31> : Policy id for the policy which is created										

### 3.15.3 lldp receive

<b>Description</b>	Enable/Disable decoding of received LLDP frames.
<b>Syntax</b>	lldp receive

### 3.15.4 lldp reinit <1-10>

Description	LLDP tx reinitialization delay in seconds.	
Syntax	lldp reinit <1-10>	
Parameter		
	<b>Name</b>	<b>Description</b>
	<1-10>	Reinitialization delay time

### 3.15.5 lldp timer <5-32768>

<b>Description</b>	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).	
<b>Syntax</b>	lldp timer <5-32768>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<5-32768>	5-32768 seconds.

### 3.15.6 lldp tlv-select

<b>Description</b>	Which optional TLVs to transmit.	
<b>Syntax</b>	lldp tlv-select { management-address   port-description   system-capabilities   system-description   system-name }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	management-address	Enable/Disable transmission of management address
	port-description	Enable/Disable transmission of port description
	system-capabilities	Enable/Disable transmission of system capabilities
	system-description	Enable/Disable transmission of system description
	system-name	Enable/Disable transmission of system name.

### 3.15.7 lldp transmission-delay

<b>Description</b>	Sets LLDP transmission-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will be delayed after LLDP configuration has changed) in seconds.)	
<b>Syntax</b>	lldp transmission-delay <1-8192>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-8192>	transmission-delay seconds

### 3.15.8 lldp transmit

<b>Description</b>	Enable/Disable transmission of LLDP frames.
<b>Syntax</b>	lldp transmit
<b>Parameter</b>	

## 3.16 RFC2544 Testing Configure Commands

### 3.16.1 rfc2544 profile <word32>

<b>Description</b>	RFC2544 profile configuration	
<b>Syntax</b>	rfc2544 profile <word32>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word32>	Profile name up to 32 characters long

### 3.16.2 rfc2544 rename profile

<b>Description</b>	Rename an existing profile	
<b>Syntax</b>	rfc2544 rename profile <word32> <word32>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	profile <word32>	Old profile name
	<word32>	New profile name

### 3.16.3 rfc2544 save <word32> <word>

<b>Description</b>	Save a report to a file on a TFTP server
<b>Syntax</b>	rfc2544 save <word32> <word>

Parameter	Name	Description
	<word32>	Name of existing report to save
	<word>	TFTP server URL on the form tftp://server[:port]/path-to-file

### 3.16.4 rfc2544 start <word32> profile <word32> [ desc <line128> ]

<b>Description</b>	Start execution of a pre-configured profile	
<b>Syntax</b>	rfc2544 start <word32> profile <word32> [ desc <line128> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	start <word32>	Unique name of resulting report
	profile <word32>	Name of existing profile to execute
	desc <line128>	Description that will appear in the report

### 3.16.5 rfc2544 stop <word32>

<b>Description</b>	Stop execution of an ongoing test	
<b>Syntax</b>	rfc2544 stop <word32>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word32>	Report name to stop execution of

### 3.16.6 show rfc2544 profile [ <word32> ]

<b>Description</b>	show rfc2544 profile name	
<b>Syntax</b>	show rfc2544 profile [ <word32> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<word32>	rfc2544 profile name

## 3.17 GVRP Configure Commands

### 3.17.1 gvrp

<b>Description</b>	Enable GVRP on port(s)	
<b>Syntax</b>	gvrp	
<b>Parameter</b>		

### 3.17.2 gvrpjoin request vlan

<b>Description</b>	Emit a Join-Request for test purpose	
<b>Syntax</b>	gvrp join-request vlan<vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	List of VLANs

### 3.17.3 gvrpleave request vlan

<b>Description</b>	Emit a leave-Request for test purpose	
<b>Syntax</b>	gvrp leave-request vlan<vlan_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	vlan_list	List of VLANs

### 3.17.4 gvrp max-vlans

<b>Description</b>	gvrpmaximum number of VLANs	
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<b>Syntax</b>	gvrp max-vlans<1-4095>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<1-4095>	A valid range is from 1-4095.

### 3.17.5 gvrp time { [ join-time <1-20> ] [ leave-time <60-300> ] [ leave-all-time <1000-50> ] }

<b>Description</b>	Set gvrp time	
<b>Syntax</b>	gvrp time { [ join-time <1-20> ] [ leave-time <60-300> ] [ leave-all-time <1000-5000> ] }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	1-20	join timer, available from 1 to 20
	60-300	leave timer, available from 60 to 300
	1000-5000	leaveall timer, available from 1000 to 5000

## 3.18 Voice VLAN Configure Commands

### 3.18.1 voice vlan

<b>Description</b>	Vlan for Voice appliance attributes
<b>Syntax</b>	voice vlan
<b>Parameter</b>	

### 3.18.2 voice vlan aging-time

<b>Description</b>	Set secure learning aging time for voice traffic	
<b>Syntax</b>	voice vlan aging-time <10-10000000>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	10-10000000	Aging time, 10-10000000 seconds

### 3.18.3 voice vlan class

<b>Description</b>	Set voice traffic class	
<b>Syntax</b>	voice vlan class { <0-7>   low   normal   medium   high }	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	0-7	Traffic class value
	low	Traffic class low (0)
	normal	Traffic class normal (1)
	medium	Traffic class medium (2)
	high	Traffic class high (3)

### 3.18.4 voice vlan oui

<b>Description</b>	Set voice traffic OUI configuration	
<b>Syntax</b>	voice vlan oui <oui> [ description <line32> ]	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	oui	OUI value
	description	Set description for the OUI
	line32	Description line

### 3.18.5 voice vlan vid

<b>Description</b>	Set voice VLAN ID	
<b>Syntax</b>	voice vlan vid <vlan_id>	

<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<vlan_id>	VLAN ID, 1-4095

## 3.19 Profile alarm Commands

### 3.19.1 profile alarm

<b>Description</b>	Profile alarm
<b>Syntax</b>	profile alarm
<b>Parameter</b>	

### 3.19.2 alarm

<b>Description</b>	Set alarm content	
<b>Syntax</b>	alarm <alarmId> { mask   unmask   major   minor }	
<b>Parameter</b>	101~114: GE-1~14 Port link down (for 14 port model)	
	<b>Name</b>	<b>Description</b>
	alarmId	151: set Power alarm
	mask	Set alarm as mask, it means event will not be send notify
	unmask	Set alarm as un-mask, it means event will be send notify
	major	Set alarm level as major
	minor	Set alarm level as minor

## 3.20 PoE Commands

### 3.20.1 poe management mode

<b>Description</b>	Use management mode to configure PoE power management method.	
<b>Syntax</b>	poe management mode <mode>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	allocation-consumption	Max. port power determined by allocated, and power is managed according to power consumption.
	allocation-reserved-power	Max. port power determined by allocated, and power is managed according to reserved power.
	class-consumption	Max. port power determined by class, and power is managed according to power consumption.
	class-reserved-power	Max. port power determined by class, and power is managed according to reserved power.
	lldp-consumption	Max. port power determined by LLDP Media protocol, and power is managed according to power consumption.
	lldp-reserved-power	Max. port power determined by LLDP Media protocol, and power is managed according to reserved power.

### 3.20.2 poe supply

<b>Description</b>	Use poe supply to specify the maximum power the power supply
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	can deliver.	
<b>Syntax</b>	poe supply <power>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<power>	Value: 1-240 Maximum power the power supply can deliver.

### 3.20.3 poe 4pairs

<b>Description</b>	Enable 4pairs mode.
<b>Syntax</b>	poe 4pairs
<b>Parameter</b>	

### 3.20.4 poe mode

<b>Description</b>	Set PoE mode.	
<b>Syntax</b>	poe mode <mode>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	disable	Set poe to disable
	enable	Set poe to enable always
	schedule	Set poe to enable by scheduling
	force-on	Enable PoE and set the port to supply power to the connected PD even when the PD doesn't support the IEEE 802.3at or IEEE 802.3af standard. Make sure the connected PD supports auto voltage polarity and the operating voltage range is 54V to 40V. The operation mode will be set to 802.3at automatically after PoE force-on mode is enabled. The operation mode setting will remain at 802.3at even after PoE force-on mode is cancelled.

### 3.20.5 poe operation

<b>Description</b>	Set PoE operation mode.	
<b>Syntax</b>	poe operation <af/at>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	af	Set operation mode to 802.3af(Maximum power 15.4W)
	at	Set operation mode to 802.3at(Maximum power 30.0 W)

### 3.20.6 poe power

<b>Description</b>	Set maximum power for port in allocation mode.	
<b>Syntax</b>	poe power limit <power>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<power>	Maximum power for the interface (0-15.4 Watt for PoE standard mode, 0-30.0 Watt for PoE plus mode)

### 3.20.7 poe priority

<b>Description</b>	Set PoE port priority	
<b>Syntax</b>	poe priority <priority>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	critical	Set priority to critical.
	high	Set priority to high.
	low	Set priority to low.

### 3.20.8 poe reset

<b>Description</b>	Set PoE power reset time.	
<b>Syntax</b>	poe reset <Hour> <Minute> <range_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	<0-23>	Hour
	<0-59>	Minute
	<range_list>	Day(s).(1:Sunday, 2:Monday, 3:Tuesday, 4:Wednesday, 5:Thursday, 6:Friday, 7:Saturday)

### 3.20.9 poe schedule

<b>Description</b>	Set PoE power scheduling during the week.	
<b>Syntax</b>	poe schedule <Day> <range_list>	
<b>Parameter</b>		
	<b>Name</b>	<b>Description</b>
	fri mon sat sun thu tue wed	Day
	<range_list>	There are 48 time interval one day. Each interval has 30 minutes. ( [1]<00:00-00:29> [2]<00:30-00:59>[3]<01:00-01:29> ... [47]<23:00-23:29> [48]<23:30-23:59>).