FSM-6228G

28-Port Industrial Ethernet Managed Switch

CLI Command Reference

April, 2015

CONTENTS

[LIST OF TABLES]

[LIST OF FIGURES]

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 FSM-6228G 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 FSM-6228G (see the Quick 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:
• FSM-6228G Quick Installation Guide

2. Operator Interface

2 Operator Interface

2.1 Introduction

Access to the Operations System (OS) /Network Element (NE) system is protected by a logon security system. You can log on to the NE 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.

All the NEs have the same initial user name (admin) and password (admin). 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. The system can handle one local logon session and at least four remote/OS sessions.

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 Authorization Level

Level	Description
Superuser	Superuser can access all management features.
Engineer	Engineer can access all management features except user account management.
Guest (default)	Read-only mode (Guest can only change his own password). Users of this level can query pages like PM and FM.

2.4   Screen Description

```
localhost login: admin
Password: *****

ISwitch 00.02.01 (08/22/2013 19:04:52)
CLI Module Version              : 4.3.0.181
SNMP Module Version             : 1.0[MIB v0.40]
OAMP Module Version             : 4.4.2.186
Inband Database Version         : v1.00.7
General Database Version        : v1.00.7
WEB Module Version              : 4.1-f
```

Figure 2-1 Screen Description

2.5   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)#
Ring Group Config Mode	Engineer	(ring-group-conf)#
Trunk Group Config Mode	Engineer	(trunk-group-conf)#
Router Rip Config Mode	Engineer	(router-rip-conf)#
Router Ospf Config Mode	Engineer	(router-ospf-conf)#

2.6   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.

2.7 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	

2.8 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 Interface Gigabit Mode Commands

3.5 Acl-profile Configure Mode Commands

3.6 Sch-profile Configure Mode Commands

3.7 Interface VLAN Mode Commands

3.8 Router RIP Configure Mode Commands

3.9 Router OSPF Configure Mode 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 bye

Description	Quit CLI.
Syntax	bye
Parameter	None

3.1.2 !

Description	Execute the specific number of command in history	
Syntax	! <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1 ~ 32 **Type**: Mandatory

3.1.3 configure

Description	Enter configuration mode.
Syntax	configure
Parameter	None

3.1.4 enable

Description	Enter enable mode.
Syntax	enable
Parameter	None

3.1.5 exit

Description	Exit current mode.
Syntax	exit
Parameter	None

3.1.6 list alarm table detail

Description	List valid alarm ID
Syntax	list alarm table detail
Parameter	None

3.1.7 list command-tree

Description	List tree of all available CLI commands
Syntax	list command-tree
Parameter	None

3.1.8 list event table

Description	List valid event ID
Syntax	list event table
Parameter	None

3.1.9 list execution-modes

Description	List all available execution modes
Syntax	list execution-modes
Parameter	None

3.1.10 list timezone

Description	List time zones
Syntax	list timezone
Parameter	None

3.1.11 show env

Description	Show CLI environment variables
Syntax	show env
Parameter	None

3.1.12 show history

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

3.1.13 show time

Description	Show current time
Syntax	show time
Parameter	None

3.1.14 show uptime

Description	Show uptime
Syntax	show uptime
Parameter	None

3.1.15 show version

Description	Show version
Syntax	show version
Parameter	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

Description	Enter configuration mode.
Syntax	configure
Parameter	None

3.2.2 disable

Description	Enter init mode.
Syntax	disable
Parameter	None

3.2.3 kick

Description	Kick off a logged-in user (only superuser can execute this command)	
Syntax	kick <index> {console | cli | web}	
Parameter		
	Name	**Description**
	<index>	**Valid values**: 1 ~ 10 **Type**: Mandatory

3.2.4 ping

Description	send ICMP ECHO_REQUEST to network hosts	
Syntax	ping <ip> ping <ip> count <count> ping <ip> count <count> size <size> ping <ip> size <size>	
Parameter		
	Name	**Description**
	<ip>	**Valid values**: - **Type**: Mandatory
	<count>	Packet count **Valid values**: 1 ~ 4294967295 **Default value**: 0 **Type**: Mandatory
	<size>	The number of data bytes to be sent **Valid values**: 1 ~ 65500 **Default value**: 0 **Type**: Mandatory

3.2.5 show account

Description	Show account list.
Syntax	show account
Parameter	None

3.2.6 show aging

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

3.2.7 show bootloader

Description	Show boot loader information.

Syntax	show bootloader
Parameter	None

3.2.8 show clisettings

Description	Show CLI settings.
Syntax	show clisettings
Parameter	None

3.2.9 show cos-queue-mapping

Description	Show CoS queue mapping configuration.
Syntax	show cos-queue-mapping
Parameter	None

3.2.10 show cpu

Description	Show CPU information
Syntax	show cpu
Parameter	None

3.2.11 show dot1x

Description	Show dot1x information.
Syntax	show dot1x
Parameter	None

3.2.12 show dot1x eapol-stats {<portNo>|all}

Description	Show dot1x EAPOL stats.	
Syntax	show dot1x eapol-stats {<portNo>|all}	
Parameter		
	Name	**Description**
	<portNo>	Gigabit port. **Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.13 show dot1x pae-info-status {<portNo>|all}

Description	Show dot1x PAE status.	
Syntax	show dot1x pae-info-status {<portNo>|all}	
Parameter		
	Name	**Description**
	<portNo>	Gigabit port. **Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.14 show dot1x radius-stats

Description	Show dot1x radius stats.
Syntax	show dot1x radius-stats
Parameter	None

3.2.15 show env

Description	Show CLI environment variables
Syntax	show env
Parameter	None

3.2.16 show ext-tpid

Description	Show TPID for the VLAN Tag
Syntax	show ext-tpid
Parameter	None

3.2.17 show fdb

Description	Show MAC learning table.
Syntax	show fdb
Parameter	None

3.2.18 show fdb interface gigabit <portNo>

Description	Show MAC learning table per gigabit port.	
Syntax	show fdb interface gigabit <portNo>	
Parameter		
	Name	Description
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.19 show fdb interface trunk-group <number>

Description	Show forwarding table per trunk group.	
Syntax	show fdb interface trunk-group <number>	
Parameter		
	Name	Description
	<Group number>	**Valid values**: 1 ~ 2 **Type**: Mandatory

3.2.20 show fdb vlan <vlanid>

Description	Show MAC learning table per VLAN index.	
Syntax	Show fdb vlan <vlanid>	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.2.21 show fdb interface trunk-group <number>

Description	Show forwarding table per trunk group.	
Syntax	show fdb interface trunk-group <number>	
Parameter		
	Name	Description
	<number>	Trunk group. **Valid values**: 1 ~ 2 **Type**: Mandatory

3.2.22 show fdbstatic

Description	Show static MAC forwarding table.
Syntax	Show fdbstatic
Parameter	None

3.2.23 show fdbstatic interface gigabit <portNo>

Description	Show static MAC forwarding table per gigabit port.

Syntax	Show fdbstatic interface gigabit <protNo>	
Parameter		
	Name	Description
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.24 show fdbstatic vlan <vlanid>

Description	Show static MAC forwarding table per VLAN index.	
Syntax	show fdbstatic vlan <vlanid>	
Parameter		
	Name	Description
	<vlanid>	**Valid values:** 1~4094 **Type**: Mandatory

3.2.25 show firmware status

Description	Show firmware update status.
Syntax	show firmware status
Parameter	None

3.2.26 show firmware partition

Description	Show firmware partition information.
Syntax	show firmware partition
Parameter	None

3.2.27 show history

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

3.2.28 show http

Description	Show HTTP configuration.
Syntax	show http
Parameter	None

3.2.29 show igmp-acl-profile {<number>|all}

Description	Show IGMP ACL profile	
Syntax	Show profile igmp-acl-profile {<number>|all}	
Parameter		
	Name	Description
	<number>	IGMP ACL profile number. **Valid values**: 1 ~ 15 **Type**: Mandatory

3.2.30 show igmp-mvr-profile {<number>|all}

Description	Show IGMP MVR profile	
Syntax	Show profile igmp-mvr-profile {<number>|all}	
Parameter		
	Name	Description
	<number>	IGMP MVR profile number. **Valid values**: 1 ~ 15 **Type**: Mandatory

3.2.31 show interface gigabit all

Description	Show interface information of all ports
Syntax	show interface gigabit all
Parameter	None

3.2.32 show interface gigabit <portNo>

Description	Show interface information per gigabit port.	
Syntax	show interface gigabit <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.33 show interface gigabit <portNo> acl

Description	Show ACL profile per gigabit port.	
Syntax	show interface gigabit <portNo> acl	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.34 show interface gigabit <portNo> counter

Description	Show Ethernet counter per gigabit port.	
Syntax	show interface gigabit <portNo> counter	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory
	counter	Show Gigabit Ethernet counter.

3.2.35 show interface gigabit <portNo> igmp

Description	Show IGMP information per port.	
Syntax	show interface gigabit <portNo> igmp	
Parameter		
	Name	**Description**
	<portNo>	Gigabit port. **Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.36 show interface gigabit <portNo> msti

Description	Show MSTI info for specific gigabit.
Syntax	show interface gigabit <portNo> msti
Parameter	None

3.2.37 show interface gigabit <portNo> port-isolation

Description	Show isolation information per gigabit port.	
Syntax	show interface gigabit <portNo> port-isolation	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.38 show interface gigabit <portNo> qos

Description	Show QoS per gigabit port.

Syntax	show interface gigabit <portNo> qos	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.2.39 show interface gigabit <portNo> rmon-counter

Description	Show Ethernet counter per gigabit port.	
Syntax	show interface gigabit <portNo> rmon-counter	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.2.40 show interface gigabit <portNo> storm-control

Description	Show storm control information per gigabit port.	
Syntax	show interface gigabit <portNo> storm-control	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.2.41 show interface gigabit <portNo> stp

Description	Show STP information per gigabit port.	
Syntax	show interface gigabit <portNo> stp	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory
	stp	Show STP port information.

3.2.42 show interface gigabit <portNo> vlan

Description	Show VLAN information of a port	
Syntax	show interface gigabit <portNo> vlan	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory
	vlan	Show VLAN information.

3.2.43 show interface trunk-group

Description	show trunk group information.
Syntax	show interface trunk-group
Parameter	None

3.2.44 show interface vlan

Description	Show VLAN interface information of all VLANs.
Syntax	show interface vlan
Parameter	None

3.2.45 show interface vlan igmp

Description	Show IGMP information.
Syntax	show interface vlan igmp
Parameter	None

3.2.46 show interface vlan <vlanid>

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

3.2.47 show interface vlan <vlanid> igmp

Description	Show IGMP information per vlan	
Syntax	show interface vlan <vlanid> igmp	
Parameter		
	Name	Description
	<vlanid>	VLAN ID. **Valid values**: 1 ~ 4094 **Type**: Mandatory

3.2.48 show jumboframe

Description	Show jumbo frame settings.
Syntax	show jumboframe
Parameter	None

3.2.49 show login-users

Description	Show logged-in users.
Syntax	show login-users
Parameter	None

3.2.50 show multicast-fdb

Description	Show IGMP VLAN multicast forwarding table.	
Syntax	show multicast-fdb show multicast-fdb vlan <vlanid> show multicast-fdb interface gigabit <portNo>	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094. **Type**: Optional
	<portNo>	**Valid values**: 1~28. **Type**: Optional

3.2.51 show multicast-fdb srclist

Description	Show multicast source list table.
Syntax	show multicast-fdb srclist
Parameter	None

3.2.52 show multicast-fdb static

Description	Show IGMP VLAN static multicast forwarding table.	
Syntax	show multicast-fdb static show multicast-fdb static vlan <vlanid> show multicast-fdb static interface gigabit <portNo>	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094.

		Type: Optional
	\<portNo\>	Valid values: 1~28.
		Type: Optional

3.2.53 show policer

Description	Show ingress policer table.
Syntax	show policer
Parameter	None

3.2.54 show port-isolation

Description	Show all port isolation information.
Syntax	show port-isolation
Parameter	None

3.2.55 show port-mirror

Description	Show port mirror information.
Syntax	show port-mirror
Parameter	None

3.2.56 show port-shaper

Description	Show port shaper information.
Syntax	show port-shaper
Parameter	None

3.2.57 show profile acl {\<number\>|all}

Description	Show ACL profile detail information.	
Syntax	show profile acl {\<number\>|all}.	
Parameter		
	Name	Description
	\<number\>	Valid values: 1 ~ 20
		Type: Mandatory
	all	Show all ACL profile.

3.2.58 show protocol-vlan

Description	Show protocol based VLAN information for all entries.
Syntax	show protocol-vlan
Parameter	None

3.2.59 show queue-scheduler profile

Description	Show scheduler profile table.
Syntax	show queue-scheduler profile
Parameter	None

3.2.60 show queue-shaper

Description	Show queue shaper information.
Syntax	show queue-shaper
Parameter	None

3.2.61 show ring

Description	Show the current configuration and state for all ring groups.
Syntax	show ring
Parameter	None

3.2.62 show runningcfg

Description	Show running configuration.
Syntax	show runningcfg
Parameter	None

3.2.63 show runningcfg default

Description	Show default running configuration.
Syntax	show runningcfg default
Parameter	None

3.2.64 show runningcfg backup

Description	Show running configuration backup.
Syntax	show runningcfg backup
Parameter	None

3.2.65 show sntp

Description	Show SNTP information.
Syntax	show sntp
Parameter	None

3.2.66 show ssl decrypted

Description	Show ssl certificate with decrypted format.
Syntax	show ssl decrypted
Parameter	None

3.2.67 show ssl encrypted

Description	Show ssl certificate with encrypted format.
Syntax	show ssl encrypted
Parameter	None

3.2.68 show stp

Description	System Wide Spanning Tree Setting/Status.
Syntax	show stp
Parameter	None

3.2.69 show syslog

Description	Show syslog configuration.
Syntax	show syslog
Parameter	None

3.2.70 show system information

Description	Show system information.
Syntax	show system information
Parameter	None

3.2.71 show system inventory

Description	Show system inventory.
Syntax	show system inventory
Parameter	None

3.2.72 show time

Description	Show current time.

Syntax	Show time
Parameter	None

3.2.73 show topology-ring

Description	Show neighbor device information, the MAC address and connected port numbers.
Syntax	show topology-ring
Parameter	None

3.2.74 show uptime

Description	Show uptime
Syntax	show uptime
Parameter	None

3.2.75 show version

Description	Show version information.
Syntax	show version
Parameter	None

3.2.76 show vlan

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

3.2.77 show vlan <vlanid>

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

3.2.78 show vlan {unknown-uc|unknown-mc|broadcast}

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

3.2.79 show vlan-trans

Description	Show VLAN translation table for all
Syntax	show vlan-trans
Parameter	None

3.2.80 show route static

Description	Show routing static table.
Syntax	show route static
Parameter	None

3.2.81 show http

Description	show http and https information.
Syntax	show http
Parameter	None

3.3 Configure Mode Commands

Commands that can be executed under Configure Mode

3.3.1 interface gigabit <portNo>

Description	Gigabit Ethernet interface. (enter gigabit interface mode)	
Syntax	interface gigabit <portNo>	
Parameter		
	Name	Description
	<portNo>	**Valid values**: 1 ~ 28 **Type**: Mandatory

3.3.2 interface vlan <vlanid>

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

		Type: Mandatory

3.3.3 profile acl

Description	Enter Acl Profile Config Mode
Syntax	profile acl
Parameter	None

3.3.4 profile sch

Description	Enter Scheduling Profile Config Mode
Syntax	profile sch
Parameter	None

3.3.5 sntp polling-interval <interval>

Description	Set SNTP Polling interval.	
Syntax	sntp polling-interval <interval>	
Parameter		
	Name	**Description**
	<interval>	**Valid values**: 60 ~ 65535 seconds, 0: disable polling **Type**: Mandatory

3.3.6 sntp server address <ip>

Description	Set SNTP server address.	
Syntax	sntp server address <ip>	
Parameter		
	Name	**Description**
	<ip>	**Type**: Mandatory

3.3.7 sntp sync

Description	Manual SNTP synchronization.
Syntax	sntp sync
Parameter	None

3.3.8 time set timezone

Description	Set time zone.	
Syntax	time set timezone <timezone> time set timezone default	
Parameter		
	Name	**Description**
	<timezone>	**Valid values**: please see 'list timezone' **Type**: Mandatory
	default	Set time zone to default (GMT/UTC). **Type**: Mandatory

3.3.9 time set {date|time}

Description	Set date/time.	
Syntax	time set date <month> <day> <year> time set time <hour> <minute> time set time <hour> <minute> <second>	
Parameter		
	Name	**Description**
	<month>	**Valid values**: 1 ~ 12 **Type**: Mandatory
	<day>	**Valid values**: 1 ~ 31 **Type**: Mandatory
	<year>	**Valid values**: 0 ~ 36 **Type**: Mandatory
	<hour>	**Valid values**: 0 ~ 23 **Type**: Mandatory
	<minute>	**Valid values**: 0 ~ 59 **Type**: Mandatory
	<second>	**Valid values**: 0 ~ 59 **Type**: Optional

3.3.10 account add <username>

Description	Add an account.	
Syntax	account add <username> account add <username> password <password> account add <username> password <password> comment <comment> account add <username> password <password> level <account_level> account add <username> password <password> level <account_level> comment <comment>	
Parameter		
	Name	**Description**
	<username>	**Valid values**: 1 ~ 31 characters **Type**: Mandatory
	<password>	**Valid values**: 0 ~ 31 characters **Type**: Mandatory
	<account_level>	**Valid values**: superuser engineer guest **Type**: Mandatory
	<comment>	**Valid values**: 0 ~ 31 characters **Type**: Mandatory

3.3.11 account delete <username>

Description	Delete an account.	
Syntax	account delete <username>	
Parameter		
	Name	**Description**
	<username>	**Valid values**: 1 ~ 31 characters **Type**: Mandatory

3.3.12 account modify <username>

Description	Modify an account	
Syntax	account modify <username> account modify <username> comment <comment> account modify <username> level <account_level> account modify <username> level <account_level> comment <comment> account modify <username> password <password> account modify <username> password <password> comment <comment> account modify <username> password <password> level <account_level> account modify <username> password <password> level <account_level> comment <comment>	
Parameter		
	Name	**Description**
	<username>	**Valid values**: 1 ~ 31 characters **Type**: Mandatory
	<password>	**Valid values**: 0 ~ 31 characters **Type**: Mandatory
	<account_level>	**Valid values**: dsuperuser engineer guest **Type**: Mandatory
	<comment>	**Valid values**: 0 ~ 31 characters **Type**: Mandatory

3.3.13 kick <index> { cli|console|web}

Description	Kick off a logged-in user.	
Syntax	kick <index> cli kick <index> console kick <index> web	
Parameter		
	Name	**Description**
	<index>	**Valid values**: 1 ~ 10 **Type**: Mandatory

3.3.14 syslog server <ip>

Description	Configure syslog server IP address.	
Syntax	syslog server <ip>	
Parameter		
	Name	**Description**
	<ip>	Syslog server IP address. **Type**: Mandatory

3.3.15 syslog {enable|disable}

Description	Disable or enable syslog service.

Syntax	syslog enable
	syslog disable
Parameter	None

3.3.16 clisettings <timeout>

Description	Configure CLI settings.	
Syntax	clisettings <timeout>	
	clisettings <timeout> <flag>	
	clisettings <timeout> <flag> <maxSessions>	
Parameter		
	Name	**Description**
	<timeout>	**Valid values**: 60 ~ 65535 seconds, 0: no timeout
		Type: Mandatory
	<flag>	**Valid values**: bitmap
		⊘ showAlarm(0)
		⊘ showEvent(1)
		⊘ showReadWriteStatus(2)
		Type: Optional
	<maxSessions>	**Valid values**: 1 ~ 10 sessions
		Type: Mandatory

3.3.17 runningcfg clear

Description	Clear configuration.	
Syntax	runningcfg clear all	
	runningcfg clear all noreboot	
	runningcfg clear general	
	runningcfg clear general noreboot	
Parameter		
	Name	**Description**
	all	Clear all configuration.
		Type: Mandatory
	general	Clear general configuration.
		Type: Mandatory
	noreboot	Clear configuration without Reboot.
		Must reboot system manually for the changes to take effect!
		Type: Optional

3.3.18 runningcfg get <ip> <username> <password> {binary|cli} <string>

Description	Get exported configuration files from a FTP server.	
Syntax	runningcfg get <ip> <username> <password> binary <string>	
	runningcfg get <ip> <username> <password> cli <string>	
Parameter		
	Name	**Description**
	<ip>	**Type**: Mandatory
	<username>	**Valid values**: 1 ~ 32 characters
		Type: Mandatory
	<password>	**Valid values**: 1 ~ 32 characters
		Type: Mandatory
	binary	Get two binary images.
		Type: Mandatory
	cli	Get two CLI scripts.
		Type: Mandatory
	<string>	Remote filename prefix.
		Valid values: 1 ~ 64 characters
		Type: Mandatory

3.3.19 runningcfg import download

Description	Import configuration from files retrieved via 'runningcfg get'.	
Syntax	runningcfg import download binary	
	runningcfg import download binary noreboot	
	runningcfg import download cli	
	runningcfg import download cli noreboot	
Parameter		
	Name	**Description**
	binary	Import configuration from binary images retrieved via 'runningcfg get'.
		Type: Mandatory
	cli	Import configuration from the CLI scripts retrieved via 'runningcfg get'.
		Type: Mandatory
	Noreboot	Import configuration without Reboot.
		Must reboot system manually for the changes to take effect!
		Type: Optional

3.3.20 runningcfg put <ip> <username> <password> {binary|cli} <string>

Description	Put exported configuration files to a FTP server.	
Syntax	runningcfg put <ip> <username> <password> binary <string>	
	runningcfg put <ip> <username> <password> cli <string>	
Parameter		
	Name	**Description**
	<ip>	**Type**: Mandatory
	<username>	**Valid values**: 1 ~ 32 characters
		Type: Mandatory
	<password>	**Valid values**: 1 ~ 32 characters
		Type: Mandatory
	binary	Put two binary images.
		Type: Mandatory
	cli	Put CLI scripts.
		Type: Mandatory
	<string>	Remote filename prefix.
		Valid values: 1 ~ 64 characters
		Type: Mandatory

3.3.21 runningcfg replace-save <inbandBackupIndex>

Description	Save running config to FLASH replacing existing the specified backup.	
Syntax	runningcfg replace-save <inbandBackupIndex>	
	runningcfg replace-save <inbandBackupIndex> <inbandBackupName>	
	runningcfg replace-save <inbandBackupIndex> <inbandBackupName> <generalBackupIndex>	
	runningcfg replace-save <inbandBackupIndex> <inbandBackupName> <generalBackupIndex> <generalBackupName>	
Parameter		
	Name	**Description**
	<inbandBackupIndex>	**Valid values**: 1 ~ 16
		Type: Mandatory
	<inbandBackupName>	**Valid values**: 1 ~ 31 characters
		Type: Optional
	<generalBackupIndex>	**Valid values**: 1 ~ 16
		Type: Optional
	<generalBackupName>	**Valid values**: 1 ~ 31 characters
		Type: Optional

3.3.22 runningcfg restore index <inbandBackupIndex>

Description	Restore configuration.	
Syntax	runningcfg restore index <inbandBackupIndex> runningcfg restore index <inbandBackupIndex> <generalBackupIndex> runningcfg restore index <inbandBackupIndex> <generalBackupIndex> noreboot	
Parameter		
	Name	**Description**
	<inbandBackupIndex>	**Valid values**: 1 ~ 16 **Type**: Mandatory
	<generalBackupIndex>	**Valid values**: 1 ~ 16 **Type**: Optional (if omitted, use the same index as <inbandBackupIndex>)
	noreboot	Restore database without reboot. Must reboot system manually for the changes to take effect! **Type**: Optional

3.3.23 runningcfg restore name <inbandBackupName>

Description	Restore configuration.	
Syntax	runningcfg restore name <inbandBackupName> runningcfg restore name <inbandBackupName> <generalBackupName> runningcfg restore name <inbandBackupName> <generalBackupName> noreboot	
Parameter		
	Name	**Description**
	<inbandBackupName>	**Valid values**: 1 ~ 31 characters **Type**: Mandatory
	<generalBackupName>	**Valid values**: 1 ~ 31 characters **Type**: Optional (if omitted, use the same name as <inbandBackupName>)
	noreboot	Restore database without reboot. Must reboot system manually for the changes to take effect! **Type**: Optional

3.3.24 runningcfg save

Description	Save running config to FLASH.	
Syntax	runningcfg save runningcfg save <inbandBackupName> runningcfg save <inbandBackupName> <generalBackupName>	
Parameter		
	Name	**Description**
	<inbandBackupName>	**Valid values**: 1 ~ 31 characters **Type**: Optional
	<generalBackupName>	**Valid values**: 1 ~ 31 characters **Type**: Optional (if omitted, use the same name as <inbandBackupName>)

3.3.25 firmware partition <partition>

Description	Set boot partition.	
Syntax	firmware partition <partition>	
Parameter		
	Name	Description
	<partition>	**Valid values**: 0 ~ 1 **Type**: Mandatory

3.3.26 firmware write

Description	Perform Remote Download. Schedule a remote download (scheduled upgrade). Cancel a scheduled upgrade.	
Syntax	firmware write <ip> <username> <password> <string> {bootloader| image} firmware write <ip> <username> <password> <string> {bootloader| image} {noreboot|<time>} firmware write <ip> <username> <password> <string> {bootloader| image} noreboot <time> firmware write cancel	
Parameter		
	Name	Description
	<ip>	**Type**: Mandatory
	<username>	**Valid values**: 1 ~ 32 characters **Type**: Mandatory
	<password>	**Valid values**: 0 ~ 32 characters **Type**: Mandatory
	<string>	Image path and filename. **Valid values**: 1 ~ 64 characters **Type**: Mandatory
	image	Perform remote download for the software image. **Type**: Mandatory
	bootloader	Perform remote download for the boot loader. **Type**: Mandatory
	noreboot	Perform Remote Download without Reboot. Must reboot system manually for the changes to take effect! **Type**: Optional
	<noreboot>	Time for scheduled upgrade. (MM/DD/YYYY HH:MM:SS) **Type**: Optional
	cancel	Cancel scheduled upgrade. **Type**: Mandatory

3.3.27 system restart

Description	Restart system.	
Syntax	system restart system restart <time>	
Parameter		
	Name	Description
	<time>	Time for scheduled restart. (MM/DD/YYYY HH:MM:SS) **Type**: Optional

3.3.28 system restart cancel

Description	Cancel a previously-scheduled system restart.
Syntax	system restart cancel
Parameter	None

3.3.29 route add <network> netmask <netmask> gateway <gateway>

Description	Add a route	
Syntax	route add <network> netmask <netmask> gateway <gateway>	
Parameter		
	Name	**Description**
	<network>	Destination network address. **Type**: Mandatory
	<netmask>	**Type**: Mandatory
	<gateway>	**Type**: Mandatory

3.3.30 route delete <network> netmask <netmask>

Description	Delete a route.	
Syntax	route delete <network> netmask <netmask>	
Parameter		
	Name	**Description**
	<network>	Destination network address. **Type**: Mandatory
	<netmask>	**Type**: Mandatory

3.3.31 default-gateway <default_gateway>

Description	Configure default gateway IP address.	
Syntax	default-gateway <default_gateway>	
Parameter		
	Name	**Description**
	<default_gateway>	**Type**: Mandatory

3.3.32 ip-address <ip>

Description	Configure IP address / netmask / gateway.	
Syntax	ip-address <ip> ip-address <ip> netmask <netmask> ip-address <ip> netmask <netmask> <default_gateway>	
Parameter		
	Name	**Description**
	<ip>	**Type**: Mandatory
	<netmask>	**Type**: Optional
	<default_gateway>	**Type**: Optional

3.3.33 default all

Description	Set all configurations to default.	
Syntax	default all default all except account	
Parameter		
	Name	**Description**
	except account	Set all configurations to default except user account. **Type**: Mandatory

3.3.34 list timezone

Description	List timezones.
Syntax	list timezone
Parameter	None

3.3.35 system-info contact <string>

Description	Modify system contact.	
Syntax	system-info contact <string>	
Parameter		
	Name	**Description**
	<string>	**Valid values**: 0 ~ 255 characters (ASCII code: 0x20 - 0x7E) **Type**: Mandatory

3.3.36 system-info location <string>

Description	Modify system location.	
Syntax	system-info location <string>	
Parameter		
	Name	**Description**
	<string>	**Valid values**: 0 ~ 255 characters (ASCII code: 0x20 - 0x7E) **Type**: Mandatory

3.3.37 system-info name <string>

Description	Modify system name.	
Syntax	system-info name <string>	
Parameter		
	Name	**Description**
	<string>	**Valid values**: 1 ~ 255 characters (ASCII code: 0x21 - 0x7E) **Type**: Mandatory

3.3.38 http port {<portNo>|default}

Description	Set HTTP server port.	
Syntax	http port <portNo> http port default	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1 ~ 65535 **Type**: Mandatory
	default	Set http server port to default (80) **Type**: Mandatory

3.3.39 temperature shift down <time>

Description	Set downshift time.	
Syntax	temperature shift down <time>	
Parameter		
	Name	**Description**
	<timer>	**Valid values**: 1 ~ 255 seconds **Type**: Mandatory

3.3.40 temperature shift up <time>

Description	Set upshift time.	
Syntax	temperature shift up <time>	
Parameter		
	Name	**Description**
	<timer>	**Valid values**: 1 ~ 255 seconds **Type**: Mandatory

3.3.41 temperature threshold down <threshold>

Description	Set downshift temperature threshold.	
Syntax	temperature threshold down <threshold>	
Parameter		
	Name	**Description**
	<threshold>	**Valid values**: -55 ~ 85 degrees Centigrade **Type**: Mandatory

3.3.42 temperature threshold up <threshold>

Description	Set upshift temperature threshold.	
Syntax	temperature threshold up <threshold>	
Parameter		
	Name	**Description**
	<threshold>	**Valid values**: -55 ~ 85 degrees Centigrade **Type**: Mandatory

3.3.43 vlan <vlanid>

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

3.3.44 vlan <vlanid> <name>

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

3.3.45 vlan disable <vlanid>

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

3.3.46 aging <time>

Description	Configure aging time for a bridge port.	
Syntax	aging <time>	
Parameter		
	Name	Description
	<time>	**Valid values**: 10 ~ 1000000 (seconds) **Type**: Mandatory

3.3.47 fdb-delete all

Description	Delete all dynamic entries from forwarding table.	
Syntax	fdb-delete all	
Parameter		
	Name	Description
	all	Delete all dynamic FDB entries. **Type**: Mandatory

3.3.48 fdb-delete interface gigabit <portNo>

Description	Delete Forwarding table entries per gigabit port.	
Syntax	fdb-delete interface gigabit <portNo>	
Parameter		
	Name	Description
	<portNo>	**Valid values**: 1~ 28 **Type**: Mandatory

3.3.49 fdb-delete vlan <vlanid>

Description	Delete forwarding table entries per VLAN index.	
Syntax	fdb-delete vlan <vlanid>	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.3.50 fdbstatic <number> interface gigabit <portNo> <vlanid><mac>

Description	Create static MAC forwarding table entry.	
Syntax	fdbstatic <number> interface gigabit<portNo><vlanid><mac>	
Parameter		
	Name	Description
	<number>	Entry position. **Valid values**: 1~512 **Type**: Mandatory
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory
	<mac>	**Valid values**: xx:xx:xx:xx:xx:xx **Type**: Mandatory

3.3.51 fdbstatic delete <number>

Description	Delete static MAC forwarding table entry.	
Syntax	fdbstatic delete <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~512 **Type**: Mandatory

3.3.52 fdbstatic delete all

Description	Delete all entries of static MAC forwarding table.
Syntax	fdbstatic delete all
Parameter	None

3.3.53 fdbstatic delete interface gigabit <portNo>

Description	Delete static MAC forwarding table entry per gigabit port.	
Syntax	fdbstatic delete interface gigabit <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.3.54 fdbstatic delete vlan <vlanid>

Description	Delete static MAC forwarding table entry per VLAN index.	
Syntax	fdbstatic delete vlan <vlanid>	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.3.55 stp {disable|enable}

Description	Configure spanning tree protocol settings.	
Syntax	stp {disable|enable}	
Parameter		
	Name	**Description**
	disable	Disable STP.
	enable	Enable STP.

3.3.56 stp bpdu {deny|flooding}

Description	Set BPDU packet filter (deny/flooding).	
Syntax	stp bpdu {deny|flooding}	
Parameter		
	Name	**Description**
	deny	Deny BPDU packet.
	flooding	Flood BPDU packet.

3.3.57 stp forward-delay <number>

Description	Set STP forward delay time.	
Syntax	stp forward-delay <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 4 ~ 30 (seconds) **Type**: Mandatory

3.3.58 stp hello-time <number>

Description	Set STP hello time.	
Syntax	stp hello-time <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1 ~ 10 (seconds) **Type**: Mandatory

3.3.59 stp max-age <number>

Description	Set STP max age value.	
Syntax	stp max-age <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 6 ~ 40 (seconds) **Type**: Mandatory

3.3.60 stp priority <number>

Description	Set STP priority.	
Syntax	stp priority <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 0 ~ 61440 step 4096 **Type**: Mandatory

3.3.61 stp version {stp|rstp}

Description	Set STP version.	
Syntax	stp version {stp|rstp}	
Parameter		
	Name	**Description**
	stp	Spanning tree protocol.
	rstp	Rapid spanning tree protocol.

3.3.62 jumboframe {enable|disable}

Description	Set jumbo frame settings.	
Syntax	jumboframe {enable|disable}	
Parameter		
	Name	**Description**
	enable	Enable jumbo frame.
	disable	Disable jumbo frame.

3.3.63 jumboframe mtu <value>

Description	MTU size.	
Syntax	jumboframe mtu <value>	
Parameter		
	Name	**Description**
	<value>	Range. **Valid values**: 1536~9000 (bytes) **Type**: Mandatory

3.3.64 cos-queue-mapping cos <cos-number> queue <queue-number>

Description	Set CoS and queue mapping.	
Syntax	cos-queue-mapping cos <cos-number> queue <queue-number>	
Parameter		
	Name	**Description**
	<cos-number>	**Valid values**: 0~7 **Type**: Mandatory
	<queue-number>	**Valid values**: 0~7 **Type**: Mandatory

3.3.65 policer cos-mark green <green-number> yellow <yellow-number> red <red-number>

Description	Set ingress policer CoS remark mapping table.	
Syntax	policer cos-mark green <green-number> yellow <yellow-number> red <red-number>	
Parameter		
	Name	**Description**
	<green-number>	Color green and CoS number mapping. **Valid values**: 0~7 **Type**: Mandatory
	<yellow-number>	Color yellow and CoS number mapping. **Valid values**: 0~7 **Type**: Mandatory
	<red-number>	Color red and CoS number mapping. **Valid values**: 0~7 **Type**: Mandatory

3.3.66 policer dscp-mark green <green-number> yellow <yellow-number> red <red-number>

Description	Set ingress policer DSCP remark mapping table.	
Syntax	policer dscp-mark green <green-number> yellow <yellow-number> red <red-number>	
Parameter		
	Name	**Description**
	<green-number>	Color green and DSCP number mapping. **Valid values**: 0~63 **Type**: Mandatory
	<yellow-number>	Color yellow and DSCP number mapping. **Valid values**: 0~63 **Type**: Mandatory
	<red-number>	Color red and DSCP number mapping. **Valid values**: 0~63 **Type**: Mandatory

3.3.67 policer ingress-color {aware|blind}

Description	Enable/Disable ingress-color function.	
Syntax	policer ingress-color {aware|blind}	
Parameter		
	Name	**Description**
	aware	Enable ingress color function.
	blind	Disable ingress color function.

3.3.68 policer ingress-color cos <number> {red|yellow|green}

Description	Set ingress-color mapping table.	
Syntax	policer ingress-color cos <number> {green|yellow|red}	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 0~7 **Type**: Mandatory
	green|yellow|red	Green or yellow or red. **Type**: Mandatory

3.3.69 mirror analyzer-port {enable|disable}

Description	Enable/Disable analyzer port configuration.	
Syntax	mirror analyzer-port {enable|disable}	
Parameter	None	
	Name	**Description**
	enable	Enable port mirror.
	disable	Disable port mirror.

3.3.70 mirror analyzer-port <portNo>

Description	Set analyzer port.	
Syntax	mirror analyzer-port <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.3.71 vlan <vlanid> unknown-uc {blcok|forward}

Description	Block/ Forward unknown unicast packet per VLAN.	
Syntax	vlan <vlanid> unknown-uc block vlan <vlanid> unknown-uc forward	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.3.72 vlan <vlanid> unknown-mc {block|forward}

Description	Block/Forward unknown multicast packet per VLAN.	
Syntax	vlan <vlanid> unknown-mc block vlan <vlanid> unknown-mc forward	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.3.73 vlan <vlanid> broadcast {block|forward}

Description	Block/Forward broadcast packet per VLAN.	
Syntax	vlan <vlanid> broadcast block vlan <vlanid> broadcast forward	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.3.74 port-mirror monitor-port <portNo>

Description	Set the gigabit port to be monitored.	
Syntax	port-mirror monitor-port <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.3.75 port-mirror {enable|disable}

Description	Enable/Disable port mirror.
Syntax	port-mirror enable port-mirror disable
Parameter	None

3.3.76 port-mirror {tx-analyzer-port|rx-analyzer-port} <portNo>

Description	Set Tx analyzer port (monitor 'out' packet of monitored port)/Rx analyzer port (monitor 'in' packet of monitored port).	
Syntax	port-mirror tx-analyzer-port <portNo> port-mirror rx-analyzer-port <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.3.77 counter interface-counter clear <portNo>

Description	Clear interface counter per gigabit port.	
Syntax	counter interface-counter clear <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.3.78 counter rmon-counter clear <portNo>

Description	Clear Ethernet counter per gigabit port.	
Syntax	counter rmon-counter clear <portNo>	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.3.79 multicast-fdb delete all

Description	Delete multicast forwarding table.	
Syntax	multicast-fdb delete all multicast-fdb delete vlan <vlanid> multicast-fdb delete interface gigabit <portNo>	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094. **Type**: Mandatory
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.3.80 multicast-fdb static delete

Description	Delete static multicast forwarding table.	
Syntax	multicast-fdb static delete <number> multicast-fdb static delete all multicast-fdb static delete vlan <vlanid> multicast-fdb static delete interface gigabit <portNo>	
Parameter		
	Name	**Description**
	<number>	Static multicast forwarding table entry index. **Valid values**: 1~128 **Type**: Mandatory
	<vlanid>	**Valid values**: 1~4094. **Type**: Mandatory
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.3.81 multicast-fdb static <number> interface gigabit <portNo> <vlan> <ipaddr>

Description	Create static IGMP VLAN forwarding table entry.	
Syntax	multicast-fdb static <number> interface gigabit <portNo> <vlan> <ipaddr>	
Parameter		
	Name	**Description**
	<number>	Static multicast forwarding table entry index. **Valid values**: 1~128 **Type**: Mandatory
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory
	<vlanid>	**Valid values**: 1~4094. **Type**: Mandatory
	<ipaddr>	IGMP VLAN group IP address. **Valid values**: 224.0.0.0~239.255.255.255 **Type**: Mandatory

3.3.82 ring-group <number>

Description	Entry ring group interface	
Syntax	ring-group <number>	
Parameter		
	Name	**Description**
	<number>	Ring group index **Valid values**: 1~3 **Type**: Mandatory

3.3.83 ext-tpid <number>

Description	Set tpid.	
Syntax	ext-tpid <number>	
Parameter		
	Name	**Description**
	<number>	tpid **Valid values**: 0x0000~0xffff **Type**: Mandatory

3.3.84 profile igmp-mvr

Description	Entry IGMP MVR interface.
Syntax	profile igmp-mvr

Parameter	None

3.3.85 profile igmp-acl

Description	Entry IGMP ACL interface.
Syntax	profile igmp-acl
Parameter	None

3.3.86 dot1x {enable|disable}

Description	Enable / disable dot1x.
Syntax	dot1x {enable|disable}
Parameter	None

3.3.87 dot1x radius set <ip> <auth_port> <secret>

Description	Set dot1x parameters.	
Syntax	dot1x radius set <ip> <auth_port> <secret>	
Parameter		
	Name	**Description**
	<ip>	IP address. **Format** : 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	<auth_port>	Authentication port. **Valid values**: 1 ~ 65535 **Default values**: 1812 **Type**: Mandatory
	<secret>	Authentication key. **Length**: 1 ~ 16 **Type**: Mandatory

3.3.88 dot1x clear eapol-stats {<portNo>|all}

Description	Clear dot1x EAPOL stats.	
Syntax	dot1x clear eapol-stats {<portNo>|all}	
Parameter		
	Name	**Description**
	<portNo>	Gigabit port. **Valid values**: 1 ~ 28 **Type**: Mandatory

3.3.89 dot1x clear dot1x-radius-stats

Description	Clear dot1x radius-stats
Syntax	dot1x clear dot1x-radius-stats
Parameter	None

3.3.90 https {enable|disable}

Description	Enable/Disable https.
Syntax	https {enable|disable}
Parameter	None

3.3.91 https port {<portNo>|default}

Description	Set https port by specific port or default port.	
Syntax	https port {<portNo>|default}	
Parameter		
	<portNo>	https port number. **Valid values:** 1 ~ 65535 **Type**: Mandatory
	default	https default port number is 443. **Type**: Mandatory

3.3.92 interface trunk-group <number>

Description	Enter trunk group configure mode.	
Syntax	interface trunk-group <number>	
Parameter		
	<number>	Trunk group index. **Valid values:** 1 ~ 2 **Type**: Mandatory

3.3.93 fdb-delete interface trunk-group <number>

Description	Delete forwarding table per trunk group.	
Syntax	fdb-delete interface trunk-group <number>	
Parameter		
	<number>	Trunk group index. **Valid values:** 1 ~ 2 **Type**: Mandatory

3.3.94 ssl default-certificate

Description	Use system default SSL certificate
Syntax	ssl default-certificate
Parameter	None

3.3.95 ssl upload

Description	Upload new SSL certificate
Syntax	ssl upload
Parameter	None

3.4 Interface gigabit Mode Commands

3.4.1 accfrm

Description	Set acceptable frame type.	
Syntax	Accfrm{all|tag|untag}	
Parameter		
	Name	Description
	all	Accept all frames.
	tag	Accept tagged frame only.
	untag	Accept un-tagged frame only.

3.4.2 max-mac-limit {enable|disable}

Description	Enable/Disable max-MAC limitation of learning MAC address.	
Syntax	max-mac-limit {enable|disable}	
Parameter		
	Name	Description
	disable	Disable max-mac limitation.
	enable	Enable max-mac limitation.

3.4.3 max-mac <value>

Description	Set max-MAC limitation number.	
Syntax	max-mac <value>	
Parameter		
	Name	Description
	<value>	**Valid values**: 0~32 **Type**: Mandatory

3.4.4 priority <priority>

Description	Set user priority for the gigabit port.	
Syntax	priority <priority>	
Parameter		
	Name	Description
	<priority>	**Valid values**: 0 ~ 7 **Type**: Mandatory

3.4.5 vlan <vlanid>

Description	Join VLAN with default setting (tagged).	
Syntax	vlan <vlanid>	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.4.6 vlan <vlanid> disable

Description	Leave joined VLAN.	
Syntax	vlan <vlanid> disable	
Parameter		
	Name	Description
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory
	disable	Leave joined VLAN

3.4.7 vlan <vlanid> tag

Description	Join tagged VLAN.	
Syntax	vlan <vlanid> tag	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory
	tag	Join Tagged VLAN

3.4.8 vlan <vlanid> untag

Description	Join untagged VLAN.	
Syntax	vlan <vlanid> untag	
Parameter		
	Name	**Description**
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory
	untag	Join Untagged VLAN

3.4.9 stpport {disable|enable}

Description	Configure STP port.	
Syntax	stpport {disable|enable}	
Parameter		
	Name	**Description**
	disable	Disable STP port.
	enable	Enable STP port.

3.4.10 stpport cost <number>

Description	Set STP port path cost.	
Syntax	stpport cost <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1 ~ 200000000 **Type**: Mandatory

3.4.11 stpport edge-port {enable|disable}

Description	Set STP port edge-type.	
Syntax	stpport edge-port {enable|disable}	
Parameter		
	Name	**Description**
	enable	Set as edge-type.
	disable	Set as none edge-type.

3.4.12 stpport priority <number>

Description	Set STP port priority.	
Syntax	stpport priority <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 0~240 step 16 **Type**: Mandatory

3.4.13 flow-control {enable|disble}

Description	Enable/Disable flow-control.	
Syntax	flow-control {enable|disble}	
Parameter		
	Name	Description
	enable	Enable flow-control.
	disable	Disable flow-control.

3.4.14 speed

Description	Configure copper port Ethernet speed.	
Syntax	speed {auto|full-l000mbps|full-100mbps|full-10mbps|half-100mbps|half-10mbps}	
Parameter		
	Name	Description
	auto	Auto negotiation.
	full-l000mbps	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.

(new)
3.4.15 sfp-speed

Description	Configure fiber port Ethernet speed.	
Syntax	speed {auto|full-l000mbps|full-100mbps|full-2500mbps}	
Parameter		
	Name	Description
	auto	Auto negotiation.
	full-l000mbps	Set 1000Mbps full duplexing.
	full-100mbps	Set 100Mbps full duplexing.
	full-25000mbps	Set 2500Mbps full duplexing.

3.4.16 phy-priority { sfp|copper }

Description	Set copper/SFP for gigabit port 25/26.	
Syntax	phy-priority{ sfp|copper }	
Parameter		
	Name	Description
	sfp	SFP first.
	copper	Copper first.

3.4.17 port {enable/disable}

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

3.4.18 default vlan

Description	Set default VLAN to gigabit port.	
Syntax	default vlan <vlanid>	
Parameter		
	Name	Description

	<vlanid>	**Valid values**: 1 ~ 4094 **Type**: Mandatory

3.4.19 policer pir <pir-rate> pbs <pbs-size> cir <cir-rate> cbs <cbs-size> {drop|cos| dscp}

Description	Set ingress policer parameters.	
Syntax	policer pir <pir-rate> pbs <pbs-size> cir <cir-rate> cbs <cbs-size> {drop| cos|dscp}	
Parameter		
	Name	**Description**
	<pir-rate>	Ingress total max rate setting. **Valid values**: 1~1000000 **Type**: Mandatory
	<pbs-size>	Ingress queue size setting. **Valid values**: 1~65535 **Type**: Mandatory
	<cir-rate>	Ingress max rate for first stage setting. **Valid values**: 1~1000000 **Type**: Mandatory
	<cbs-size>	Ingress max rate for second stage setting. **Valid values**: 1~65535 **Type**: Mandatory
	{drop|cos|dscp}	Policer type **Type**: Mandatory

3.4.20 policer disable

Description	Disable policer function.
Syntax	policer disable
Parameter	None

3.4.21 acl-profile-bind <number>

Description	Port ACL profile binding.	
Syntax	acl-profile-bind <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~20 **Type**: Mandatory

3.4.22 def-acl {permit|deny}

Description	Set port default ACL rule.
Syntax	def-acl permit def-acl deny
Parameter	None

3.4.23 queue-scheduler bind <number>

Description	Scheduler profile binding.	
Syntax	queue-scheduler bind <number>	
Parameter		
	Name	**Description**
	<number>	Scheduler profile index. **Valid values**: 1~8 **Type**: Mandatory

3.4.24 port-shaper {enable|disable}

Description	Enable/Disable port shaper.
Syntax	port-shaper {enable|disable}
Parameter	None

3.4.25 port-shaper <rate>

Description	Set port shaper rate.	
Syntax	port-shaper <rate>	
Parameter		
	Name	**Description**
	<rate>	**Valid values**: 1~1000000 **Type**: Mandatory

3.4.26 queue-shaper {enable|disable}

Description	Enable/Disable queue shaper.
Syntax	queue-shaper {enable|disable}
Parameter	None

3.4.27 queue-shaper queue <number> <rate>

Description	Set queue shaper parameters.	
Syntax	queue-shaper queue <number> <rate>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 0~7 **Type**: Mandatory
	<rate>	**Valid values**: 1~1000000 **Type**: Mandatory

3.4.28 port-isolation <portNo>

Description	Enable/Diabled port-isolation action.	
Syntax	port-isolation <portNo> port-isolation <portNo> disable	
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28 **Type**: Mandatory

3.4.29 unknown-uc rate <rate>

Description	Set storm rate for unknown unicast packet.	
Syntax	unknown-uc rate <rate>	
Parameter		
	Name	**Description**
	<rate>	**Valid values**: 1~1000000 (Kbps) **Type**: Mandatory

3.4.30 unknown-uc {block|forward}

Description	Block/ Forward unknown unicast packet.
Syntax	unknown-uc block unknown-uc forward
Parameter	None

3.4.31 unknown-mc rate <rate>

Description	Set storm rate for unknown multicast packet.	
Syntax	unknown-mc rate <rate>	
Parameter		
	Name	Description
	<rate>	**Valid values**: 1~1000000 (Kbps) **Type**: Mandatory

3.4.32 unknown-mc {block|forward}

Description	Block/Forward unknown multicast packet.
Syntax	unknown-mc block unknown-mc forward
Parameter	None

3.4.33 broadcast rate <rate>

Description	Set storm rate for broadcast packet.	
Syntax	broadcast rate <rate>	
Parameter		
	Name	Description
	<rate>	**Valid values**: 1~1000000 (Kbps) **Type**: Mandatory

3.4.34 broadcast {block|forward}

Description	Block/Forward broadcast packet.
Syntax	broadcast block broadcast forward
Parameter	None

3.4.35 vlan-stack {enable|disable}

Description	Enable/disable vlan stack.
Syntax	vlan-stack {enable|disable}
Parameter	None

3.4.36 protocol-vlan <number> create <ether-type> <svlan> <s-prio>

Description	Create protocol VLAN.	
Syntax	protocol-vlan <number> create <ether-type> <svlan> <s-prio>	
Parameter		
	Name	Description
	<number>	Protocol VLAN index. **Valid values**: 1 ~ 20 **Type**: Mandatory
	<ether-type>	Ether type. **Valid values**: 0 ~ FFFF,(hex) **Type**: Mandatory
	<svlan>	Service VLAN (SVALN). **Valid values**: 1 ~ 4094 **Type**: Mandatory
	<s-prio>	CoS of SVLAN. **Valid values**: 0 ~ 8 **Type**: Mandatory

3.4.37 protocol-vlan <number> delete

Description	Delete protocol VLAN.	
Syntax	protocol-vlan <number> delete	
Parameter		
	Name	**Description**
	<number>	Protocol VLAN index. **Valid values**: 1 ~ 20 **Type**: Mandatory

3.4.38 vlan-trans <number> create <cvlan> <c-prio> <svlan> <s-prio> many-to-

Description	Create VLAN translation.	
Syntax	vlan-trans <number> create <cvlan> <c-prio> <svlan> <s-prio> many-to-one-replaced	
Parameter		
	Name	**Description**
	<number>	VLAN translation index. **Valid values**: 1 ~ 20 **Type**: Mandatory
	<cvlan>	Customer VLAN (CVLAN). **Valid values**: 1 ~ 4094 **Type**: Mandatory
	<c-prio>	CoS of VLAN. **Valid values**: 0 ~ 8 **Type**: Mandatory
	<svlan>	Service VLAN (SVLAN). **Valid values**: 1 ~ 4094 **Type**: Mandatory
	<s-prio>	CoS of SVLAN. **Valid values**: 0 ~ 8 **Type**: Mandatory

3.4.39 vlan-trans <number> delete

Description	Delete VLAN translation.	
Syntax	vlan-trans <number> delete	
Parameter		
	Name	**Description**
	<number>	VLAN translation index. **Valid values**: 1 ~ 20 **Type**: Mandatory

3.4.40 igmp mvrprofile <index>

Description	Binding IGMP MVR profile to specified port.	
Syntax	igmp mvrprofile <index>	
Parameter		
	Name	Description
	<index>	IGMP MVR index. **Valid values**: 1 ~ 15 **Type**: Mandatory

3.4.41 igmp aclprofile <index>

Description	Binding IGMP ACL profile to specified port.	
Syntax	igmp aclprofile <index>	
Parameter		
	Name	Description
	<index>	IGMP ACL index. **Valid values**: 1 ~ 15 **Type**: Mandatory

3.4.42 igmp max-channel <number>

Description	Set max channel to specified port.	
Syntax	igmp max-channel <number>	
Parameter		
	Name	Description
	<number>	Max channel number. **Valid values**: 1 ~ 512 **Type**: Mandatory

3.4.43 dot1x {force-reinitialize| force-reauthenticate}

Description	Enable for force PAE port re-initialize / re-authenticate.
Syntax	dot1x {force-reinitialize| force-reauthenticate}
Parameter	None

3.4.44 dot1x auth-port-control {auto| force-authorized| force-unauthorized}

Description	Set dot1x authentication type of PAE port.
Syntax	dot1x auth-port-control {auto| force-authorized| force-unauthorized}
Parameter	None

3.4.45 dot1x auth-quiet-period <period>

Description	Set quiet period of PAE port	
Syntax	dot1x auth-quiet-period <period>	
Parameter		
	Name	Description
	<period>	The quiet period of PAE port **Valid values**: 1 ~ 255 seconds. **Default values**: 60 seconds **Type**: Mandatory

3.4.46 dot1x auth-tx-period <period>

Description	Set timeout of authenticator waiting for EAP-Response / Identity from supplication of PAE port
Syntax	dot1x auth-tx-period <period>
Parameter	

	Name	Description
	<period>	The quiet period of PAE port **Valid values**: 1 ~ 255 seconds. **Default values**: 30 seconds **Type**: Mandatory

3.4.47 dot1x max-req <number>

Description	Set max times of backend Authenticator send EAP-Request to supplicant before restarting the authentication process.
Syntax	dot1x max-req <number>
Parameter	

	Name	Description
	<number>	Max request number. **Valid values**: 1 ~ 10. **Default values**: 2 **Type**: Mandatory

3.4.48 dot1x auth-supp-timeout <timeout>

Description	Set timeout of authenticator wait for EAP-Response(exclude EAP-Request / Identify) after sending EAP-Request.
Syntax	dot1x auth-supp-timeout <timeout>
Parameter	

	Name	Description
	<timeout>	Authenticator timeout. **Valid values**: 1 ~ 255 seconds. **Default values**: 30 seconds **Type**: Mandatory

3.4.49 dot1x auth-server-timeout <timeout>

Description	Set timeout of Authenticator wait Access-Challenge / Access-Accept / Access-Reject after sending Access-Request
Syntax	dot1x auth-server-timeout <timeout>
Parameter	

	Name	Description
	<timeout>	Authenticator timeout. **Valid values**: 1 ~ 255 seconds. **Default values**: 30 seconds **Type**: Mandatory

3.4.50 dot1x reauth {enable|disable}

Description	Enable/Disable re-authentication of APE port
Syntax	dot1x reauth {enable|disable}
Parameter	None

3.4.51 dot1x reauth-period <period>

Description	period of re-authentication of PAE port	
Syntax	dot1x reauth-period <period>	
Parameter		
	Name	**Description**
	<period>	Period of re-authentication. **Valid values**: 1 ~ 3600 seconds. **Default values**: 3600 seconds **Type**: Mandatory

3.5 Acl-profile Configure Mode Commands

3.5.1 acl-profile <number> {create|delete}

Description	Create/Delete ACL profile.	
Syntax	acl-profile <number> {create|delete}	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 2~20 **Type**: Mandatory
	create|delete	**Type**: Mandatory

3.5.2 acl-profile <prof-number> {create|delete} entry <entry-number>

Description	Create/Delete ACL profile entry.	
Syntax	acl-profile <prof-number> create entry <entry-number> acl-profile <prof-number> delete entry <entry-number>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory

3.5.3 acl-profile <prof-number> set name <name>

Description	Set ACL profile name.	
Syntax	acl-profile <prof-number> set name <name>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<name>	**Valid Length**: 0~31 **Type**: Mandatory

3.5.4 acl-profile <prof-number> set entry <entry-number> mac-type set vlan <vlanid>

Description	Set VLAN index for ACL MAC type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> mac-type set vlan <vlanid>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	<vlanid>	**Valid values**: 1~4094 **Type**: Mandatory

3.5.5 acl-profile <prof-number> set entry <enrty-number> mac-type set vlan any

Description	Set VLAN index for ACL MAC type entry.	
Syntax	acl-profile <prof-number> set entry <enrty-number> mac-type set vlan any	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory

3.5.6 acl-profile <prof-number> set entry <entry-number> mac-type set {srcmac|dstmac} <mac> <mask>

Description	Set MAC for ACL MAC type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> mac-type set {srcmac|dstmac} <mac> <mask>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcmac|dstmac	Source / Destination MAC Address **Type**: Mandatory
	<mac>	**Valid values**: 00:00:00:00:00:00 ~ FF:FF:FF:FF:FF:FF **Type**: Mandatory
	<mask>	**Valid values**: 00:00:00:00:00:00 ~ FF:FF:FF:FF:FF:FF **Type**: Mandatory

3.5.7 acl-profile <prof-number> set entry <entry-number> mac-type set ethertype <ethertype>

Description	Set ether type for ACL MAC type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> mac-type set ethertype <ethertype>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	<ethertype>	**Valid values**: 0x0001~0xFFFF **Type**: Mandatory

3.5.8 acl-profile <prof-number> set entry <entry-number> mac-type set ethertype any

Description	Set ether type for ACL MAC type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> mac-type set ethertype any	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory

3.5.9 acl-profile <prof-number> set entry <entry-number> ipv4-type set {srcip|dstip} <ipaddr> <mask>

Description	Set IP for ACL IPv4 type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> ipv4-type set {srcip|dstip} <ipaddr> <mask>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcip|dstip	Source / Destination IP Address **Type**: Mandatory
	<ipaddr>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	<mask>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

3.5.10 acl-profile <prof-number> set entry <entry-number> ipv4-type set ip-protocol <protocol-id>

Description	Set protocol for ACL IPv4 type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> ipv4-type set ip-protocol <protocol-id>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	<protocol-id>	**Valid values**: 1~255 **Type**: Mandatory

3.5.11 acl-profile \<prof-number> set entry \<entry-number> ipv4-type set ip-protocol any

Description	Set protocol for ACL IPv4 type entry.	
Syntax	acl-profile \<prof-number> set entry \<entry-number> ipv4-type set ip-protocol any	
Parameter		
	Name	**Description**
	\<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	\<entry-number>	**Valid values**: 1~32 **Type**: Mandatory

3.5.12 acl-profile \<prof-number> set entry \<entry-number> l4port-type set protocol {tcp|udp}

Description	Set protocol for ACL L4Port type entry.	
Syntax	acl-profile \<prof-number> set entry \<entry-number> l4port-type set protocol {tcp|udp}	
Parameter		
	Name	**Description**
	\<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	\<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	tcp|udp	TCP or UDP packet. **Type**: Mandatory

3.5.13 acl-profile \<prof-number> set entry \<entry-number> l4port-type set {srcip|dstip} \<ipaddr> \<mask>

Description	Set IP for ACL L4Port type entry.	
Syntax	acl-profile \<prof-number> set entry \<entry-number> l4port-type set {srcip|dstip} \<ipaddr> \<mask>	
Parameter		
	Name	**Description**
	\<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	\<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcip|dstip	Source / Destination IP Address **Type**: Mandatory
	\<ipaddr>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	\<mask>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

3.5.14 acl-profile <prof-number> set entry <entry-number> l4port-type set {srcport| dstport} <number>

Description	Set port for ACL L4Port type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> l4port-type set {srcport|dstport} <number>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcport|dstport	Source / Destination port **Type**: Mandatory
	<number>	**Valid values**: 1~65535 **Type**: Mandatory

3.5.15 acl-profile <prof-number> set entry <entry-number> l4port-type set {srcport| dstport} any

Description	Set port for ACL L4Port type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> l4port-type set {srcport|dstport} any	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcport|dstport	Source / Destination port. **Type**: Mandatory

3.5.16 acl-profile <prof-number> set entry <entry-number> tos-type set {srcip|dstip} <ipaddr> <mask>

Description	Set IP for ACL ToS type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> tos-type set {srcip|dstip} <ipaddr> <mask>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	srcip|dstip	Source / Destination IP Address **Type**: Mandatory
	<ipaddr>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	<mask>	**Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

3.5.17 acl-profile <prof-number> set entry <entry -number> tos-type set type {precedence|tos|dscp } <number>

Description	Set type for ACL ToS type entry.	
Syntax	acl-profile <prof-number> set entry <entry -number> tos-type set type {precedence|tos|dscp } <number>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	precedence|tos|dscp	Precedence or ToS or DSCP Type. **Type**: Mandatory
	<number>	Precedence type. **Valid values**: 0~7 Tos type. **Valid values**: 0~15 DSCP type. **Valid values**: 0~63 **Type**: Mandatory

3.5.18 acl-profile <prof-number> set entry <entry-number> tos-type set type any

Description	Set type for ACL ToS type entry.	
Syntax	acl-profile <prof-number> set entry <entry-number> tos-type set type any	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory

3.5.19 acl-profile <prof-number> set entry <entry-number> action forwarding {deny| permit}

Description	Set ACL entry action is forwarding.	
Syntax	acl-profile <prof-number> set entry <entry-number> action forwarding {deny|permit}	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	deny|permit	Deny or Permit forwarding. **Type**: Mandatory

3.5.20 acl-profile <prof-number> set entry <entry-number> action queue <number>

Description	Set ACL entry action to specific queue number.	
Syntax	acl-profile <prof-number> set entry <entry-number> action queue <number>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	<number>	**Valid values**: 0~7 **Type**: Mandatory

3.5.21 acl-profile <prof-number> set entry <entry-number> action cos <number>

Description	Set ACL entry action is mark CoS number.	
Syntax	acl-profile <prof-number> set entry <entry-number> action cos <number>	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<entry-number>	**Valid values**: 1~32 **Type**: Mandatory
	<number>	**Valid values**: 0~7 **Type**: Mandatory

3.5.22 acl-profile <prof-number> set entry <entry-number> action copyframe

Description	Set ACL entry action is copy frame.	
Syntax	acl-profile <prof-number> set entry <entry-number> action copyframe	
Parameter		
	Name	**Description**
	<prof-number>	**Valid values**: 2~20 **Type**: Mandatory
	<enrty-number>	**Valid values**: 1~32 **Type**: Mandatory

3.6 Sch-profile Configure Mode Commands

3.6.1 scheduler-profile <number> method {spq|spq-wrr|wrr}

Description	Set scheduler profile method.	
Syntax	scheduler-profile <number> method {spq|spq-wrr|wrr}	
Parameter		
	Name	Description
	<number>	Scheduler profile index. **Valid values**: 1~8 **Type**: Mandatory
	sp|sp-wrr|wrr	sp: strict priority sp-wrr: strict priority + weighted round robin wrr: weighted round robin **Type**: Mandatory

3.6.2 scheduler-profile <prof-number> queue <queue-number> weight <number>

Description	Set scheduler profile queue weight.	
Syntax	scheduler-profile <prof-number> queue <queue-number> weight <number>	
Parameter		
	Name	Description
	<prof-number>	**Valid values**: 2~8 **Type**: Mandatory
	<queue-number>	**Valid values**: 0~7 **Type**: Mandatory
	<number>	**Valid values**: 1~255 **Type**: Mandatory

3.7　Interface VLAN Mode Commands

3.7.1　igmp vlan {create|delete}

Description	Create / Delete IGMP.
Syntax	igmp vlan create igmp vlan delete
Parameter	None

3.7.2　igmp router-port <portNo>

Description		Set IGMP VLAN source port.
Syntax		igmp router-port <portNo>
Parameter		
	Name	**Description**
	<portNo>	**Valid values**: 1~28. **Type**: Mandatory

3.7.3　igmp access-mode {snooping|proxy}

Description	Set IGMP VLAN access mode.
Syntax	igmp access-mode snooping igmp access-mode proxy
Parameter	None

3.7.4　igmp leave-mode {normal|fast}

Description	Set IGMP VLAN leave mode.
Syntax	igmp leave-mode normal igmp leave-mode fast
Parameter	None

3.7.5　igmp version {v1|v2}

Description	Set IGMP VLAN version.
Syntax	igmp version v1 igmp version v2
Parameter	None

3.7.6　igmp robustness <number>

Description		Set IGMP VLAN robustness.
Syntax		igmp robustness <number>
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~3. **Type**: Mandatory

3.7.7　igmp query-interval <number>

Description		Set IGMP VLAN query interval.
Syntax		igmp query-interval <number>
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~1800 (unit: sec). **Type**: Mandatory

3.7.8 igmp max-response-time <number>

Description	Set IGMP VLAN max response time.	
Syntax	igmp max-response-time <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~255 (unit: 100ms). **Type**: Mandatory

3.7.9 igmp last-member-query-count <number>

Description	Set IGMP VLAN last member query count.	
Syntax	igmp last-member-query-count <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~3. **Type**: Mandatory

3.7.10 igmp last-member-query-interval <number>

Description	Set IGMP VLAN last member query interval.	
Syntax	igmp last-member-query-interval <number>	
Parameter		
	Name	**Description**
	<number>	**Valid values**: 1~255 (unit: 100ms). **Type**: Mandatory

3.7.11 igmp vlan interface address <ipaddr>

Description	Set IP address of IGMP VLAN interface.	
Syntax	igmp vlan interface address <ipaddr>	
Parameter		
	Name	**Description**
	<ipaddr>	**Valid values**: 0.0.0.0~223.255.255.255. **Type**: Mandatory

3.7.12 ip-address <ip>

Description	Set layer3 IP address for specified VLAN.	
Syntax	ip-address <ip>	
Parameter		
	Name	**Description**
	<ip>	IP address. **Valid values**: 0.0.0.0~255.255.255.255 **Type**: Mandatory

3.7.13 ip-address <ip> netmask <netmask>

Description	Set layer3 IP address and netmask for specified VLAN.	
Syntax	ip-address <ip> netmask <netmask>	
Parameter		
	Name	**Description**
	<ip>	IP address. **Valid values**: 0.0.0.0~255.255.255.255 **Type**: Mandatory
	<netmask>	IP address. **Valid values**: 0.0.0.0~255.255.255.255 **Type**: Mandatory

3.7.14 igmp version {v2|v3| v3compatible}

Description	Set IGMP version.
Syntax	igmp version {v2|v3| v3compatible}
Parameter	None

3.8 Ring Group Mode Commands

3.8.1 mode {enable|disable}

Description	Enable/disable ring protection.
Syntax	mode {enable|disable}
Parameter	None

3.8.2 {node1|node2} <portNo>

Description	Set node1/node2 for ring protection.	
Syntax	{node1|node2} <portNo>	
Parameter		
	Name	**Description**
	<portNo>	Port number. **Valid values**: 1~28 **Type**: Mandatory

3.8.3 role {master| slave}

Description	Set role to ring protection.
Syntax	role {master| slave}
Parameter	None

3.8.4 id <ring-id>

Description	Set ring protection ID.	
Syntax	id <ring-id>	
Parameter		
	Name	**Description**
	<ring-id>	Ring ID. **Valid values**: 0~255 **Type**: Mandatory

3.8.5 interconnect {enable|disable}

Description	Enable/Disable multi-ring and dual-homing.
Syntax	interconnect {enable|disable}
Parameter	None

3.8.6 {node1|node2} {sf|nonsf}

Description	Set SF/Non-SF on node1/node2.
Syntax	node1 {sf|nonsf} node2 {sf|nonsf}
Parameter	None

3.8.7 protect {node1|node2}

Description	Set master protect port, only support on master ring-group.
Syntax	protect {node1|node2}
Parameter	None

3.8.8 discovery {enable|disable}

Description	Enable/Disable the ring topology monitor.
Syntax	discovery {enable|disable}

Parameter	None

3.8.9 discoverytimer <time>

Description	Set discovery timer.	
Syntax	discoverytimer <time>	
Parameter		
	Name	**Description**
	<time>	Discovery timer. **Valid values**: 10~300 **Type**: Mandatory

3.8.10 guardtimer <time>

Description	Set guardtimer.	
Syntax	guardtimer <time>	
Parameter		
	Name	**Description**
	<time>	Guard timer. **Valid values**: 10~3600 **Type**: Mandatory

3.9   IGMP MVR Mode Commands

3.9.1   igmp-mvr <number,2..15> {create|delete}

Description	Create / delete IGMP MVR profile.	
Syntax	igmp-mvr <number,2..15> {create|delete}	
Parameter		
	Name	**Description**
	<number>	IGMP MVR profile index. **Valid values**: 2~15 **Type**: Mandatory

3.9.2   igmp-mvr <p-number> entry <e-number> <startIP> <endIP> <vid>

Description	Create IGMP MVR entry.	
Syntax	igmp-mvr <p-number> entry <e-number> <startIP> <endIP> <vid>	
Parameter		
	Name	**Description**
	<p-number>	IGMP MVR profile index. **Valid values**: 2~15 **Type**: Mandatory
	<e-number>	IGMP MVR entry index. **Valid values**: 1~32 **Type**: Mandatory
	<startIP> <endIP>	IP address. **Valid values**: 0.0.0.0~255.255.255.255 **Type**: Mandatory
	<vid>	VLAN ID. **Valid values**: 1~4094 **Type**: Mandatory

3.9.3   igmp-mvr <p-number> entry <e-number> delete

Description	Delete IGMP MVR entry.	
Syntax	igmp-mvr <p-number> entry <e-number> delete	
Parameter		
	Name	**Description**
	<p-number>	IGMP MVR profile index. **Valid values**: 2~15 **Type**: Mandatory
	<e-number>	IGMP MVR entry index. **Valid values**: 1~32 **Type**: Mandatory

3.10 IGMP ACL Mode Commands

3.10.1 igmp-acl <number> {create|delete}

Description	Create / delete IGMP ACL profile.	
Syntax	igmp-acl <number> {create|delete}	
Parameter		
	Name	**Description**
	<number>	IGMP ACL profile index. **Valid values**: 2~15 **Type**: Mandatory

3.10.2 igmp-acl <number> {default-deny| default-permit}

Description	Set IGMP ACL default rule.	
Syntax	igmp-acl <number> {default-deny| default-permit}	
Parameter		
	Name	**Description**
	<number>	IGMP ACL profile index. **Valid values**: 2~15 **Type**: Mandatory

3.10.3 igmp-acl <p-number> entry <e-number> <startIP> <endIP> {<vid>|all} {permit|

Description	Create IGMP ACL entry.	
Syntax	igmp-acl <p-number> entry <e-number> <startIP> <endIP> {<vid>|all} {permit|deny}	
Parameter		
	Name	**Description**
	<p-number>	IGMP ACL profile index. **Valid values**: 2~15 **Type**: Mandatory
	<e-number>	IGMP MVR entry index. **Valid values**: 1~32 **Type**: Mandatory
	<startIP> <endIP>	IP address. **Valid values**: 0.0.0.0~255.255.255.255 **Type**: Mandatory
	<vid>	VLAN ID. **Valid values**: 1~4094 **Type**: Mandatory

3.10.4 igmp-acl <p-number> entry <e-number> delete

Description	Delete IGMP ACL entry	
Syntax	igmp-acl <p-number> entry <e-number> delete	
Parameter		
	Name	**Description**
	<p-number>	IGMP ACL profile index. **Valid values**: 2~15 **Type**: Mandatory
	<e-number>	IGMP MVR entry index. **Valid values**: 1~32 **Type**: Mandatory

3.11 Trunk Group Mode Commands

3.11.1 trunk enable static

Description	Enable link aggregation group and its mode is static.
Syntax	trunk enable static
Parameter	None

3.11.2 trunk disable

Description	Disable link aggregation group and all member port will be remove on specific port.
Syntax	trunk disable
Parameter	None

3.11.3 port-trunk add <portNo>

Description	Add member port to specific trunk group, the max member ports is 4.
Syntax	port-trunk add <portNo>
Parameter	
	<portNo>	Port number. **Valid values**: 1~28 **Type**: Mandatory

3.11.4 port-trunk remove {<portNo>|all}

Description	Remove member port from specific trunk group.
Syntax	port-trunk remove <portNo>
Parameter	
	<portNo>	Port number. **Valid values**: 1~28 **Type**: Mandatory
	all	All member port. **Type**: Mandatory

3.12 Alarm Related Commands

3.12.1 show profile alarm

Description	Show alarm profile list
Syntax	show profile alarm
Parameter	None

3.12.2 show alarm current

Description	Show current alarm list
Syntax	show alarm current
Parameter	None

3.12.3 show event

Description	Show event list
Syntax	show event (Refer to. event Table)
Parameter	None

3.12.4 show alarm history

Description	Show alarm history
Syntax	show alarm history
Parameter	None

3.12.5 event clear

Description	Clear event.
Syntax	event clear
Parameter	None

3.12.6 alarm history clear

Description	Clear alarm history.
Syntax	alarm history clear.
Parameter	None

3.12.7 profile alarm

Description	Enter Alarm Profile Configuration Mode.
Syntax	profile alarm
Parameter	None

3.12.8 alarm <alarmid> {mask|unmask|major|minor}

Description	Configure an alarm profile entry (default setting for each alarm is unmask and minor)	
Syntax	alarm <alarmid> mask alarm <alarmid> unmask alarm <alarmid> major alarm <alarmid> minor	
Parameter		
	Name	**Description**
	<alarmid>	Alarm ID **Valid values**: Refer to. Alarm Table **Type**: Mandatory
	mask	Mask this alarm **Type**: Mandatory
	unmask	Unmask this alarm **Type**: Mandatory
	major	Set alarm level to major **Type**: Mandatory
	minor	Set alarm level to minor **Type**: Mandatory

4. Commands Descriptions (Optional)

4.1 Initialize Mode Commands

4.2 Enable Mode Commands

4.3 Configure Mode Commands

4.4 Interface Gigabit Mode Commands

4.5 Acl-profile Configure Mode Commands

4.6 Sch-profile Configure Mode Commands

4.7 Interface VLAN Mode Commands

4.8 Router RIP Configure Mode Commands

4.9 Router OSPF Configure Mode Commands

4 Commands Descriptions (optional: DHCP, Layer3)

This chapter lists all optional functions for IMP series 28-Port models, including DHCP & Layer3.

4.1 Initialize Mode Commands

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

4.2 Enable Mode Commands

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

4.2.1 show system layer3

Description	Show system layer3.
Syntax	show system layer3
Parameter	None

4.2.2 show route rip

Description	Show route RIP information
Syntax	show route rip
Parameter	None

4.2.3 show rip

Description	Show RIP information.
Syntax	show rip
Parameter	None

4.2.4 show route ospf

Description	Show route OSPF information.
Syntax	show route ospf
Parameter	None

4.2.5 show ospf database

Description	Show OSPF database information.
Syntax	show ospf database

Parameter	None

4.2.6 show ospf databse asbr-summary

Description	Show OSPF database information detail for ASBR summary link states.
Syntax	show ospf databse asbr-summary
Parameter	None

4.2.7 show ospf databse external

Description	Show OSPF database information detail for external link states
Syntax	show ospf databse external
Parameter	None

4.2.8 show ospf databse network

Description	Show OSPF database information detail for network link states
Syntax	show ospf databse network
Parameter	None

4.2.9 show ospf databse nssa-external

Description	Show OSPF database information detail for NSSA external link state
Syntax	show ospf databse nssa-external
Parameter	None

4.2.10 show ospf databse router

Description	Show OSPF database information detail for router link states.
Syntax	show ospf databse router
Parameter	None

4.2.11 show ospf databse summary

Description	Show OSPF database information detail for network summary link states.
Syntax	show ospf databse summary
Parameter	None

4.2.12 show ospf neighbor

Description	Show OSPF neighbor
Syntax	show ospf neighbor
Parameter	None

4.2.13 show ospf

Description	Show OSPF configure parameters.
Syntax	Show ospf
Parameter	None

4.2.14 show vrrp

Description	Show VRRP group status.
Syntax	Show vrrp
Parameter	None

4.2.15 show route

Description	Show routing table. (include RIP, OSPF, static)
Syntax	Show route
Parameter	None

4.2.16 show dhcp binding

Description	Show DHCP binding table.	
Syntax	show dhcp binding	
	show dhcp binding <vlan-id>	
Parameter		
	Name	**Description**
	<vlan-id>	Interface VLAN **Valid values**: 1~4094. **Type**: Optional

4.2.17 show dhcp pool

Description	Show DHCP pool configuration	
Syntax	show dhcp pool	
	show dhcp pool <pool-id>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP pool index. **Valid values**: 1~5. **Type**: Optional

4.3 Configure Mode Commands

Commands that can be executed under Configure Mode.

4.3.1 dhcp {enable|disable}

Description	Enable / disable DHCP server.
Syntax	dhcp enable
	dhcp disable
Parameter	None

4.3.2 dhcp lease <1-31536000>

Description	Set DHCP pool default lease time, when DHCP pool be created, take this value as default lease time.	
Syntax	dhcp lease <1-31536000>	
Parameter		
	Name	**Description**
	<1-31536000>	Lease time **Valid values**: 1~31536000. **Type**: Mandatory

4.3.3 dhcp pool <pool-id> address-range <start-ip> <end-ip>

Description	Set DHCP pool address range. Start IP must smaller than End IP	
Syntax	dhcp pool <pool-id> address-range <start-ip> <end-ip>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<start-ip>	Start IP address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	<end-ip>	End IP address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

4.3.4   dhcp pool <pool-id> default-router <router-ip>

Description	Set DHCP pool default router	
Syntax	dhcp pool <pool-id> default-router <router-ip>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<router-ip>	Router IP address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

4.3.5   dhcp pool <pool-id> disable

Description	To disable/remove DHCP pool.	
Syntax	dhcp pool <pool-id> disable	
Parameter		
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory

4.3.6   dhcp pool <pool-id> dns-server <DNS>

Description	Set DHCP pool domain name server address	
Syntax	dhcp pool <pool-id> dns-server<DNS>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<DNS>	DNS IP address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

4.3.7   dhcp pool <pool-id> domain-name <name>

Description	Set DHCP pool domain name	
Syntax	dhcp pool <pool-id> domain-name <name>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<name>	Router IP address **Valid length**: 0 ~ 64 characters **Type**: Mandatory

4.3.8   dhcp pool <pool-id> lease <1-31536000>

Description	Set DHCP pool lease time

Syntax	dhcp pool <pool-id> lease <1-31536000>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<1-31536000>	Lease time **Valid values**: 1~31536000. **Type**: Mandatory

4.3.9 dhcp pool <pool-id> network <subnet> <netmask>

Description	Set DHCP pool network. If pool not exist, call create, else call set	
Syntax	dhcp pool <pool-id> network <subnet> <netmask>	
Parameter		
	Name	**Description**
	<pool-id>	DHCP Pool index **Valid values**: 1 ~ 5 **Type**: Mandatory
	<subnet>	Subnet address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory
	<netmask>	netmask address **Valid values**: 0.0.0.0 ~ 255.255.255.255 **Type**: Mandatory

4.3.10 ip-routing {enable|disable}

Description	Enable/disable IP routing.
Syntax	ip-routing {enable|disable}
Parameter	None

4.3.11 route rip delete {<vlanid>|all}

Description	Delete RIP route.	
Syntax	route rip delete {<vlanid>|all}	
Parameter		
	Name	**Description**
	<vlanid>	VLAN ID. **Valid values**: 1 ~ 4094 **Type**: Mandatory

4.4 Interface VLAN Mode Commands

4.4.1 layer3 {enable|disable}

Description	Enable/disable layer3.
Syntax	layer3 {enable|disable}
Parameter	None

4.4.2 ip rip auth {enable|diable}

Description	Enable/disable RIP for specified VLAN.
Syntax	ip rip auth {enable|diable}
Parameter	None

4.4.3 ip rip auth string <string>

Description	Set RIP Authentication Key.	
Syntax	ip rip auth string <string>	
Parameter		
	Name	**Description**
	<string>	Authentication Key. **Valid values**: 0~16 **Type**: Mandatory

4.4.4 ip rip {send|receive} version {v1|v2|both}

Description	Set RIP send/receive version.
Syntax	ip rip {send|receive} version {v1|v2|both}
Parameter	None

4.4.5 ip rip {send|receive} disable

Description	Disable RIP send/receive function.
Syntax	ip rip {send|receive} disable
Parameter	None

4.4.6 ip rip split-horizon {simple| poisoned-reverse| disable}

Description	Set RIP split horizon type.
Syntax	ip rip split-horizon {simple| poisoned-reverse| disable}
Parameter	None

4.4.7 ip rip {enable| disable}

Description	Enable/disable RIP for specified VLAN.
Syntax	ip rip {enable| disable}
Parameter	None

4.4.8 ip ospf authentication {message-digest|null|disable}

Description	Set OSPF authentication mode	
Syntax	ip ospf authentication {message-digest|null|disable} ip ospf authentication	
Parameter		
	Name	**Description**
	message-digest null disable	Use message-digest authentication Use no authentication Disable authentication **Type**: Optional

4.4.9 ip ospf authentication-key <string>

Description	Set authentication key.	
Syntax	ip ospf authentication-key <string>	
Parameter		
	Name	**Description**
	<string>	Authentication key. **Valid length**: 0~8 **Type**: Mandatory

4.4.10 ip ospf cost <number>

Description	Set interface cost	
Syntax	ip ospf cost <number>	
Parameter		
	Name	**Description**
	<number>	Cost **Valid values**: 1~65535 **Type**: Mandatory

4.4.11 ip ospf dead-interval <number>

Description	Set interval after which a neighbor is declared dead.	
Syntax	ip ospf dead-interval <number>	
Parameter		
	Name	**Description**
	<number>	Interval, unit: seconds **Valid values:** 1~65535 **Type:** Mandatory

4.4.12 ip ospf hello-interval <number>

Description	Set time between HELLO packets.	
Syntax	ip ospf hello-interval <number>	
Parameter		
	Name	**Description**
	<number>	Interval, unit: **Valid values**: 1~65535 **Type**: Mandatory

4.4.13 ip ospf message-digest-key <numebr> <string>

Description	Set message digest authentication password (key)	
Syntax	ip ospf message-digest-key <number> <string>	
Parameter		
	Name	**Description**
	<number>	Key ID **Valid values**: 1~255 **Type**: Mandatory
	<string>	Key **Valid length**: 0~16 Type: Mandatory

4.4.14 ip ospf mtu-ignore disable

Description	Enable/Disable OSPF mtu mismatch detection	
Syntax	ip ospf mtu-ignore ip ospf mtu-ignore disable	
Parameter		
	Name	**Description**
	disable	**Enable** mtu mismatch detection. **Type**: Mandatory

4.4.15 ip ospf network {broadcast|non-broadcast|point-to-multipoint|point-to-point}

Description	Set OSPF network type.	
Syntax	ip ospf network {broadcast|non-broadcast) ip ospf network {point-to-multipoint|point-to-point}	
Parameter		
	Name	**Description**
	broadcast non-broadcast point-to-multipoint point-to-point	Specify OSPF broadcast multi-access network Specify OSPF NBMA network Specify OSPF point-to-multipoint network Specify OSPF point-to-point network **Type**: Mandatory

4.4.16 ip ospf priority <number>

Description	Set router priority	
Syntax	ip ospf priority <number>	
Parameter		
	Name	**Description**
	<number>	Priority **Valid values**: 0~255 **Type**: Mandatory

4.4.17 ip ospf retransmit-interval <interval>

Description	Set time between retransmitting lost link state advertisements	
Syntax	ip ospf retransmit-interval <interval>	
Parameter		
	Name	**Description**
	<interval>	Interval, unit: seconds **Valid values**: 3~65535 **Type**: Mandatory

4.4.18 ip ospf transmit-delay <number>

Description	Set link state transmit delay
Syntax	ip ospf transmit-delay <number>
Parameter	

	Name	Description
	<number>	Delay time, unit: seconds. **Valid values**: 1~65535 **Type**: Mandatory

4.4.19 ip ospf enable area {<number>|<ip>}

Description	Configure OSPF area parameters	
Syntax	ip ospf enable area {<number>|<ip>}	
Parameter		
	Name	Description
	<ip> <number>	OSPF area ID in IP address format OSPF area ID as a decimal value **Type**: Mandatory

4.4.20 ip ospf {enable|disable}

Description	Enable/Disable OSPF on the interface
Syntax	ip ospf {enable|disable}
Parameter	None

4.4.21 vrrp <number> advertise-interval <interval>

Description	Set the advertisement timer.	
Syntax	vrrp <number> advertise-interval <interval>	
Parameter		
	Name	Description
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	<interval>	Advertisement interval, unit: 0.1 seconds **Valid values**: 1~2550 **Type**: Mandatory

4.4.22 vrrp <number> authentication disable

Description	Enable/Disable plain-text authentication	
Syntax	vrrp <number> authentication vrrp <number> authentication disable	
Parameter		
	Name	Description
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	disable	Disable authentication **Type**: Optional

4.4.23 vrrp <number> authentication-key <string>

Description	Set key for plain-text authentication	
Syntax	vrrp <number> authentication-key <string>	
Parameter		
	Name	Description
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	<string>	Key **Valid length**: 0~8 **Type**: Mandatory

4.4.24 vrrp <number> ip <ip>

Description	Set IP of virtual router redundancy protocol (VRRP)	
Syntax	vrrp <number> ip <ip>	
Parameter		
	Name	**Description**
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	<ip>	IP address **Valid values**: **Type**: Mandatory

4.4.25 vrrp <number> learn-master-adv-int disable

Description	Enable/Disable advertisement interval from current master	
Syntax	vrrp <number> learn-master-adv-int vrrp <number> learn-master-adv-int disable	
Parameter		
	Name	**Description**
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	disable	Ignore advertisement interval from current master **Type**: Optional

4.4.26 vrrp <number> preempt dsiable

Description	Enable/Disable preemption of lower priority Master	
Syntax	vrrp <number> preempt vrrp <number> preempt disable	
Parameter		
	Name	**Description**
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	disable	Disable preemption of lower priority Master **Type**: Optional

4.4.27 vrrp <number> priority <priority>

Description	Set priority of this VRRP group	
Syntax	vrrp <number> priority <priority>	
Parameter		
	Name	**Description**
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory
	<priority>	Priority level **Valid values**: 1~254 **Type**: Mandatory

4.4.28 vrrp <number> disable

Description	Delete VRRP group	
Syntax	vrrp <number> disable	
Parameter		
	Name	**Description**
	<number>	VRRP group number **Valid values**: 1~255 **Type**: Mandatory

4.5 Router RIP Configure Mode Commands

4.5.1 rip {enable|disable}

Description	Enable/Disable RIP
Syntax	rip {enable|disable}
Parameter	None

4.5.2 update-time <time>

Description	Set RIP update-time	
Syntax	update-time <time>	
Parameter		
	Name	**Description**
	<time>	Update time, unit :second **Valid values**: 20~3600 **Type**: Mandatory

4.5.3 gc-timeout <time>

Description	Set RIP garbage collection timeout.	
Syntax	gc-timeout <time>	
Parameter		
	Name	**Description**
	<time>	Garbage collection timeout, unit : second **Valid values**: 20~3600 **Type**: Mandatory

4.5.4 redistribute {connected|ospf|static} disable

Description	Create/Delete another routing protocol configuration.	
Syntax	redistribute {connected|ospf|static} redistribute {connected|ospf|static} disable	
Parameter		
	Name	**Description**
	connected ospf static	Connected routes (directly attached subnet or host). Open Shortest Path Protocol (OSPF). Statically configured routes. **Type**: Mandatory
	disable	Delete connected|OSPF|statically routes. **Type**: Optional

4.5.5 redistribute {connected|ospf|static} metric <number>

Description	Redistribute information from another routing protocol with metric.
Syntax	redistribute {connected|ospf|static} metric <number>
Parameter	

	Name	Description
	<number>	Metric for redistributed routes **Valid values**: 0~16 **Type**: Mandatory

4.6 Router OSPF Configure Mode Commands

4.6.1 ospf {enable|disable}

Description	Enable/Disable OSPF
Syntax	ospf {enable|disable}
Parameter	None

4.6.2 abr-type {cisco|shortcut|standard}

Description	Set OSPF ABR type	
Syntax	abr-type {cisco|shortcut|standard}	
Parameter		
	Name	**Description**
	cisco	Alternative ABR, cisco implementation.
	shortcut	Shortcut ABR.
	standard	Standard behavior (RFC2328). **Type**: Mandatory

4.6.3 rfc1583compatibility disable

Description	Enable/Disable for RFC1583 compatibility.	
Syntax	rfc1583compatibility rfc1583compatibility disable	
Parameter		
	disable	Disable RFC1583 compatibility. **Type**: Optional

4.6.4 router-id <ip>

Description	Set OSPF router ID in IP address format.	
Syntax	router-id <ip>	
Parameter		
	Name	**Description**
	<ip>	IP address. **Type**: Mandatory

4.6.5 area {<ip>|<number>} {nssa|stub|normal}

Description	Set OSPF area parameters.	
Syntax	area {<ip>|<number>} {nssa|stub|normal}	
Parameter		
	Name	**Description**

	<ip>	IP address, OSPF area ID in IP address format
	<number>	Number, OSPF area ID as a decimal value
		Type: Mandatory
	nssa	Configure OSPF area as NSSA
	stub	Configure OSPF area as STUB
	normal	Configure OSPF area as normal, delete the entry.
		Type: Mandatory

4.6.6 area {<ip>|<number>} {nssa|stub} no-summary

Description	Set OSPF area parameters	
Syntax	area {<ip>|<number>} {nssa|stub} no-summary	
Parameter		
	Name	**Description**
	<ip>	IP address, OSPF area ID in IP address format
	<number>	Number, OSPF area ID as a decimal value
		Type: Mandatory
	nssa	Configure OSPF area as NSSA
	stub	Configure OSPF area as STUB
	normal	Configure OSPF area as normal, delete the entry.
		Type: Mandatory

4.6.7 area {<ip>|<number>} nssa translate disable

Description	Configure OSPF NSSA area parameters	
Syntax	area {<ip>|<number>} nssa	
	area {<ip>|<number>} nssa translate	
	area {<ip>|<number>} nssa translate disable	
Parameter		
	Name	**Description**
	<ip>	IP address, OSPF area ID in IP address format
	<number>	Number, OSPF area ID as a decimal value
		Type: Mandatory
	translate	Configure NSSA-ABR to translate
		Type: Optional
	disable	Never translate LSA
		Type: Optional

4.6.8 area {<ip>|<number>} nssa no-summary translate disable

Description	Configure OSPF NSSA area parameters	
Syntax	area {<ip>|<number>} nssa no-summary	
	area {<ip>|<number>} nssa no-summary translate	
	area {<ip>|<number>} nssa no-summary translate disable	
Parameter		
	Name	**Description**
	<ip>	IP address, OSPF area ID in IP address format
	<number>	Number, OSPF area ID as a decimal value
		Type: Mandatory
	no-summary	Do not inject summary-LSA into NSSA
		Type: Mandatory
	translate	Configure NSSA-ABR to translate
		Type: Optional
	disable	Never translate LSA
		Type: Optional

4.6.9 area {<ip>|<number>} virtual-link <virtual-ip> disable

Description	Configure a virtual link	
Syntax	area {<ip>|<number>} virtual-link <virtual-ip>	
	area {<ip>|<number>} virtual-link <virtual-ip> disable	
Parameter		
	Name	**Description**
	<ip>	IP address, OSPF area ID in IP address format
	<number>	Number, OSPF area ID as a decimal value
		Type: Mandatory
	<virtual-ip>	IP address
		Type: Mandatory
	disable	Delete the virtual link configuration.
		Type: Optional

4.6.10 redistribute {connected|static|rip} disable

Description	Redistribute information from another routing protocol.	
Syntax	redistribute {connected|static|rip}	
	redistribute {connected|static|rip} disable	
Parameter		
	Name	**Description**
	connected	Connected routes (directly attached subnet or host)

	static	Statically configured routes
	rip	Routing Information Protocol (RIP)
		Type: Mandatory
	disable	Delete the routing protocol configuration.
		Type: Optional

4.6.11 redistribute {connected|static|rip} metric <number>

Description	Redistribute information from another routing protocol.
Syntax	redistribute {connected|static|rip} metric <number>
Parameter	

	Name	Description
	connected	Connected routes (directly attached subnet or host)
	static	Statically configured routes
	rip	Routing Information Protocol (RIP)
		Type: Mandatory
	<number>	OSPF default metric
		Valid values: 0~16777214
		Type: Mandatory

4.6.12 redistribute {connected|static|rip} metric <num> metric-type <num1>

Description	Redistribute information from another routing protocol.
Syntax	Redistribute {connected|static|rip} metric <num> metric-type <num1>
Parameter	

	Name	Description
	connected	Connected routes (directly attached subnet or host)
	static	Statically configured routes
	rip	Routing Information Protocol (RIP)
		Type: Mandatory
	< num >	OSPF default metric
		Valid values: 0~16777214
		Type: Mandatory
	<num1>	OSPF exterior metric type for redistributed routes
		Valid values: 1~2
		Type: Mandatory

4.6.13 redistribute {connected|static|rip} metric-type <1|2>

Description	Redistribute information from another routing protocol.
Syntax	redistribute {connected|static|rip} metric-type <number>

Parameter		
	Name	**Description**
	connected static rip	Connected routes (directly attached subnet or host) Statically configured routes Routing Information Protocol (RIP) **Type**: Mandatory
	<number>	OSPF exterior metric type for redistributed routes **Valid values**: 1~2 **Type**: Mandatory

4.6.14 redistribute {connected|static|rip} metric-type <num> metric <num1>

Description	Redistribute information from another routing protocol.
Syntax	redistribute {connected|static|rip} metric-type <num> metric <num1>
Parameter	

	Name	**Description**
	connected static rip	Connected routes (directly attached subnet or host) Statically configured routes Routing Information Protocol (RIP) **Type**: Mandatory
	<num>	OSPF exterior metric type for redistributed routes **Valid values**: 1~2 **Type**: Mandatory
	<num1>	OSPF default metric **Valid values**: 0~16777214 **Type**: Mandatory

4.6.15 neighbor <ip> disable

Description	Enable/Disable OSPF neighbor.
Syntax	neighbor <ip>
Parameter	

	Name	**Description**
	<ip>	OSPF nieghbor address **Type**: Mandatory
	disable	Delete OSPF nieghbor **Type**: Optional

4.6.16 neighbor <ip> poll-interval <interval> priority <priority>

Description	Set OSPF neighbor parameters.

Syntax	neighbor <ip> poll-interval <interval> priority <priority>	
	neighbor <ip> priority <priority> poll-interval <interval>	
Parameter		
	Name	**Description**
	<ip>	OSPF nieghbor address
		Type: Mandatory
	<interval>	Polling interval.
		Valid values: 1~65535
		Type: Mandatory
	<priority>	Priority.
		Valid values: 0~255
		Type: Mandatory