CLI Command Reference Guide
GFK-3061B
May 2022

PACSystems™ Industrial PROFINET Managed Ethernet Switches

CLI COMMAND REFERENCE GUIDE

EMERSON

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In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.

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1.1 Revisions in this Manual

Rev	Date	Description
B	May 2022	Updates to correct the details in the PROFINET database of the GLM switch.
A	Jan 2020	Following Emerson's acquisition of this product, changes have been made to apply appropriate branding and registration of the product with required certification agencies. No changes to material, process, form, fit, or functionality.
	Aug-2019	• Initial release.

1.2 PACSystems Documentation

PACSystems Manuals

PACSystems RX7i, RX3i, and RSTi-EP CPU Reference Manual	GFK-2222
PACSystems RX7i, RX3i, and RSTi-EP CPU Programmer's Reference Manual	GFK-2950
PACSystems RX7i, RX3i, and RSTi-EP TCP/IP Ethernet Communications User Manual	GFK-2224
PACSystems TCP/IP Ethernet Communications Station Manager User Manual	GFK-2225
PACSystems Memory Xchange Modules User's Manual	GFK-2300
PACSystems Hot Standby CPU Redundancy User Manual	GFK-2308
Proficy Machine Edition Logic Developer Getting Started	GFK-1918
Proficy Process Systems Getting Started Guide	GFK-2487
PACSystems RXi, RX3i, RX7i, and RSTi-EP Controller Secure Deployment Guide	GFK-2830
PACSystems RX3i Systems Manual	GFK-2314
PACSystems RX3i Ethernet Network Interface Unit User's Manual	GFK-2439
PACSystems RX3i PROFINET Scanner Manual	GFK-2737
PACSystems RX3i & RSTi-EP PROFINET I/O Controller Manual	GFK-2571
PACSystems Industrial PROFINET Managed Ethernet Switches Important Product Information (IPI)	GFK-3028
PACSystems Industrial PROFINET Managed Ethernet Switches User's Manual	GFK-3030
PACSystems Industrial PROFINET Managed Ethernet Switches Web Configuration Tool Guide	GFK-3062
PACSystems Industrial PROFINET Managed Ethernet Switches Secure Deployment Guide (SDG)	GFK-3063
PACSystems Industrial PROFINET Managed Ethernet Switches MRP Application Guide	GFK-2070
PACSystems Industrial PROFINET Managed Ethernet Switches Installation & Maintenance Requirements	GFK-3098

In addition to these manuals, datasheets and product update documents describe individual modules and product revisions. The most recent PACSystems documentation is available on Emerson's support website. Please see the links provided at the end of this document.

1.3 Scope

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

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 checkOperator Interface

1.5 Introduction

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

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

The CLI initial user name is (admin) and password (@admin01). 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.

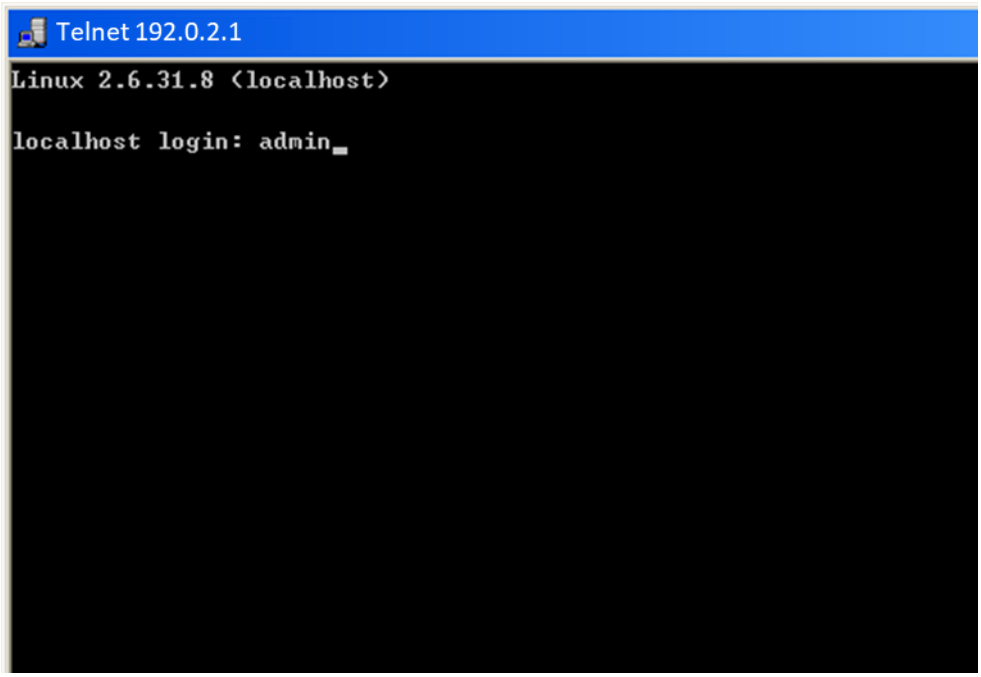
1.6 Connect Interface

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 a terminal emulator such as PuTTY)

1.7 Screen Description

1. Connecting to GLM Ethernet port (RJ45 Ethernet port)
2. Key-in the command under Telnet: *telnet 192.0.2.1*
3. Login with the default account and password.
   Username: admin
   Password: @admin01

Figure 1-1 Screen Description



1.8 Execution Modes

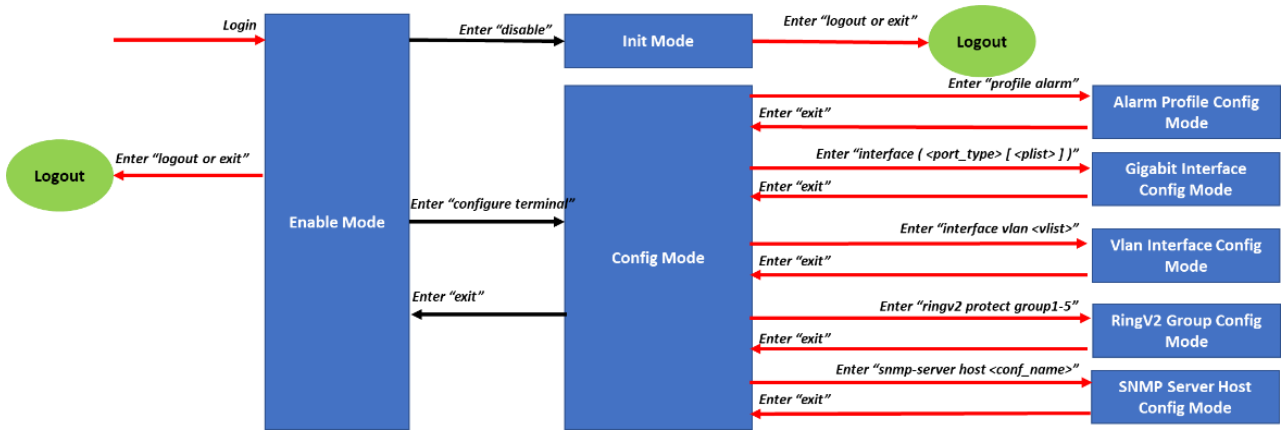
The CLI contains several execution modes. Users will see a different set of commands under different execution modes. Table 1-1 lists all the execution modes and their purposes. When users enter a certain execution mode, the corresponding mode prompt will be displayed automatically on the screen. The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

Table 1: Execution Modes

Mode	Access Level	Prompt
Init Mode	Guest	>
Enable Mode	Guest	#
Config Mode	Guest	(config)#
Alarm Profile Config Mode	Engineer	(alm-profile-config)#
Gigabit Interface Config Mode	Engineer	(config-if)#
Vlan Interface Config Mode	Engineer	(vlan-intf-conf)#
RingV2 Group Config Mode	Engineer	(ring)#
SNMP Server Host Config Mode	Engineer	(config-snmps-host)#

Note: Refer to Figure below for command to enter specific execution mode.

Figure 2: Execution Modes



1.9 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.

1.10 Terminal Key Function

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

Table 2 List of Terminal Keys

ENTER	Run a CLI config script
CTRL-M	
TAB	Tab completion. 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.
CTRL-I	
?	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	

1.11 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.

Section 2: Command Descriptions

2.1 Init. Mode Commands

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

2.1.1 exit

Description	Exit current mode and quit CLI.
Syntax	exit
Parameter	None

2.1.2 configure terminal

Description	Enter configuration mode.
Syntax	configure terminal
Parameter	None

2.1.3 enable

Description	Enter enable mode.
Syntax	enable
Parameter	None

2.1.4 show terminal

Description	Show CLI environment variables
Syntax	show terminal
Parameter	None

2.1.5 Show history

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

2.1.6 Show clock

Description	Show current time
Syntax	show clock [detail]
Parameter	None

2.1.7 Show clock detail

Description	Show detailed information
Syntax	show clock detail
Parameter	None

2.2 Enable Mode Commands

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

2.2.1 configure terminal

Description	Enter configuration mode.
Syntax	configure
Parameter	None

2.2.2 disable

Description	Enter init mode
Syntax	disable
Parameter	None

2.2.3 show access management

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

2.2.4 show access-list

Description	Access list	
Syntax	show access-list [interface [(<port_type> [<v_port_type_list>])]] [rate-limiter [<rate_limiter_list>]] [ace statistics [<ace_list>]] show access-list ace-status [static] [link-oam] [loop-protect] [dhcp] [ptp] [upnp] [arp-inspection] [mep] [ipmc] [ip-source-guard] [ip-mgmt] [conflicts] [switch <switch_list>]	
Parameter		
	Name	Description
	interface	Select an interface to configure
	ace-status	The local ACEs status
	port_type	GigabitEthernet,1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-8
	rate-limiter	Rate limiter

	rate_limiter_list	<RateLimiterList : 1~16> Rate limiter ID
	ace	Access list entry
	statistics	Traffic statistics
	ace_list	<AceId : 1~256> ACE ID
	static	The ACEs that are configured by users manually
	loop-protect	The ACEs that are configured by Loop Protect module
	ipmc	The ACEs that are configured by IPMC module
	ip-source-guard	The ACEs that are configured by IP Source Guard module
	dhcp	The ACEs that are configured by DHCP module
	conflicts	The ACEs that did not get applied to the hardware due to hardware limitations
	arp-inspection	The ACEs that are configured by ARP Inspection module

2.2.5 show aggregation

Description	Aggregation	
Syntax	show aggregation [mode]	
Parameter		
	Name	Description
	mode	Traffic distribution mode

2.2.6 show alarm

Description	Alarm information
Syntax	show alarm { history | current }

Parameter		
	Name	Description
	current	Show alarm current information
	history	Show alarm history information

2.2.7 show cpu-load

Description	CPU LOAD
Syntax	show cpu-load
Parameter	

2.2.8 show green-ethernet

Description	Green Ethernet	
Syntax	show green-ethernet [interface (<port_type> [<port_list>])] show green-ethernet eee [interface (<port_type> [<port_list>])] show green-ethernet energy-detect [interface (<port_type> [<port_list>])] show green-ethernet short-reach [interface (<port_type> [<port_list>])]	
Parameter		
	Name	Description
	eee	Shows green ethernet EEE status for a specific port or ports
	energy-detect	Shows green ethernet energy-detect status for a specific port or ports
	short-reach	Shows green ethernet short-reach status for a specific port or ports
	interface	Shows green ethernet status for a specific port or ports
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	port_list	<port_type_list> Port list in 1/1-8

2.2.9 show ip

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

2.2.10 show ip arp inspection

Description	Address Resolution Protocol information	
Syntax	show ip arp inspection [interface (<port_type> [<in_port_type_list>]) | vlan <in_vlan_list>] show ip arp inspection entry [dhcp-snooping | static] [interface (<port_type> [<in_port_type_list>])]	
Parameter		
	Name	Description
	<port_type>	Select an interface to configure
	<in_port_type_list>	Port ID in the format of switch-no/port-no

	<in_vlan_list>	arp inspection vlan list
	dhcp-snooping	learn from dhcp snooping
	static	setting from static entries

2.2.11 show ip dhcp detailed statistics

Description	DHCP server traffic statistics	
Syntax	show ip dhcp detailed statistics { server | client | snooping | relay | normal-forward | combined } [interface (<port_type> [<in_port_list>])]	
Parameter		
	Name	Description
	server	DHCP server
	client	DHCP client
	snooping	DHCP snooping
	relay	DHCP relay
	normal-forward	DHCP normal L2 or L3 forward
	combined	Show all DHCP related statistics
	<port_type>	Select an interface to configure
	<in_port_list>	Port list in 1/1-max number of the port

2.2.12 show ip dhcp excluded-address

Description	Show excluded IP database	
Syntax	show ip dhcp excluded-address	
Parameter		
	Name	Description

2.2.13

2.2.14 show ip dhcp pool

Description	Show DHCP pools information	
Syntax	show ip dhcp pool [<pool_name>]	
Parameter		
	Name	Description
	<pool_name>	Pool name in 32 characters

2.2.15 show ip dhcp relay

Description	Show DHCP relay agent configuration	
Syntax	show ip dhcp relay [statistics]	
Parameter		
	Name	Description
	[statistics]	Show traffic statistics

2.2.16 show ip dhcp server

Description	Show DHCP server information
Syntax	show ip dhcp server
Parameter	

2.2.17 show ip dhcp server binding

Description	Show DHCP address bindings information	
Syntax	show ip dhcp server binding <ip> show ip dhcp server binding [state { allocated | committed | expired }] [type { automatic | manual | expired }]	
Parameter		
	Name	Description
	<ip>	IP address in dotted-decimal notation

	allocated	State of binding is allocated
	committed	State of binding is committed
	expired	State of binding is expired
	automatic	Type of binding is automatic binding with infinite lease time
	manual	Type of binding is manual binding for a specific host
	expired	Type of binding is expired binding that is aged out

2.2.18 show ip dhcp server declined-ip

Description	Show declined IP address	
Syntax	show ip dhcp server declined-ip show ip dhcp server declined-ip <declined_ip>	
Parameter		
	Name	Description
	<declined_ip>	IP addresss

2.2.19 show ip dhcp server statistics

Description	Show DHCP server statistics
Syntax	show ip dhcp server statistics
Parameter	

2.2.20 show ip dhcp snooping

Description	Show Internet Group Management Protocol information	
Syntax	show ip dhcp snooping [interface (<port_type> [<in_port_list>])] show ip dhcp snooping table	
Parameter		
	Name	Description
	<port_type>	Select an interface to configure
	<in_port_list>	Port list in 1/1-max number of the port
	table	show ip dhcp snooping table

2.2.21 show ip http server

Description	Hypertext Transfer Protocol information
Syntax	show ip http server secure status
Parameter	

2.2.22 show ip igmp snooping

Description	Show Internet Group Management Protocol information	
Syntax	show ip igmp snooping [vlan <v_vlan_list>] [group-database [interface (<port_type> [<v_port_type_list>])] [sfm-information]] [detail] show ip igmp snooping mrouter [detail]	
Parameter		
	Name	Description
	<v_vlan_list>	VLAN identifier(s): VID
	group-database	Multicast group database from IGMP
	<port_type>	Select an interface to configure
	<v_port_type_list>	Port list in 1/1-max number of the port

	[sfm-information]	Including source filter multicast information from IGMP
	[detail]	Detail running information/statistics of IGMP snooping
	mrouter	Multicast router port status in IGMP

2.2.23 show ip interface

Description	Show Brief IP interface status
Syntax	show ip interface brief
Parameter	

2.2.24 show ip name-server

Description	Show Domain Name System
Syntax	show ip name-server
Parameter	

2.2.25 show ip route

Description	Display the current ip routing table
Syntax	show ip route
Parameter	

2.2.26 show ip source binding

Description	Show IP source binding information	
Syntax	show ip source binding [dhcp-snooping | static] [interface (<port_type> [<in_port_type_list>])]	
Parameter		
	Name	Description
	dhcp-snooping	learn from dhcp snooping
	static	setting from static entries

	<port_type>	Select an interface to configure
	<in_port_type_list>	Port list in 1/1-max number of the port

2.2.27 show ip ssh

Description	Show Secure Shell information
Syntax	show ip ssh
Parameter	

2.2.28 show ip statistics

Description	Show traffic statistics information	
Syntax	show ip statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]	
Parameter		
	Name	Description
	[system]	IPv4 system traffic
	<v_vlan_list>	VLAN identifier(s): VID
	[icmp]	IPv4 ICMP traffic
	icmp-msg	IPv4 ICMP traffic for designated message type
	<type>	ICMP message type ranges from 0 to 255

2.2.29 show ip telnet

Description	Show Telnet information
Syntax	show ip telnet
Parameter	

2.2.30 show ip verify source

Description	Show verify source information	
Syntax	show ip verify source [interface (<port_type> [<in_port_type_list>])]	
Parameter		
	Name	Description
	<port_type>	Select an interface to configure
	<in_port_type_list>]	Port list in 1/1-max number of the port

2.2.31 show ipmc

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

2.2.32 show ipv6

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

2.2.33 show lacp

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

2.2.34 show line

Description	Alive line information	
Syntax	show line [alive]	
Parameter		
	Name	Description
	alive	Display information about alive lines

2.2.35 show logging

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

2.2.36 show ntp status

Description	Show NTP information.
Syntax	show ntp status
Parameter	None

2.2.37 show users

Description	Show account list.
Syntax	show account
Parameter	None

2.2.38 show running-cfg

Description	Show running configuration.
Syntax	show running-cfg
Parameter	None

2.2.39 show running-config interface Gigabit

Description	Show port config	
Syntax	show running-config interface (<port_type> [<list>]) [all-defaults]	
Parameter		
	Name	Description
	list	<port_type_list> Port list in 1/1-8
	all-defaults	Include most/all default values

2.2.40 show running-config interface vlan

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

2.2.41 show running-config all-defautls

Description	Show all default setting
Syntax	show running-config [all-defaults]
Parameter	None

2.2.42 show running-config feature

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

2.2.43 show running-config line

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

2.2.44 show running-config vlan

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

2.2.45 show version

Description	Show firmware hardware and software status update status.
Syntax	show version
Parameter	None

2.2.46 show clock

Description	Show current time.
Syntax	Show clock
Parameter	None

2.2.47 show show mac address table

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

2.2.48 show mac address table conf

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

2.2.49 show mac address table count

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

2.2.50 show mac address table learning

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

2.2.51 show mac address table static

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

2.2.52 show mac address table interface

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

2.2.53 show mac address vlan <vlanid>

<table>
<tr><td>Description</td><td colspan="2">Show MAC learning table per VLAN index.</td></tr>
<tr><td>Syntax</td><td colspan="2">show mac address-table { learning | count } vlan <vlan_id></td></tr>
<tr><td rowspan="3">Parameter</td><td colspan="2"></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td><vlanid></td><td>Valid values: 1~4094

Type: Mandatory</td></tr>
</table>

2.2.54 show mvr

Description	MVR information	
Syntax	show mvr [vlan <v_vlan_list> | name <mvr_name>] [group-database [interface (<port_type> [<v_port_type_list>])] [sfm-information]] [detail]	
Parameter		
	Name	Description
	vlan	Search by VLAN
	v_vlan_list	<vlan_list> MVR multicast VLAN list
	name	Search by MVR name
	mvr_name	<MvrName : word16> MVR multicast VLAN name
	group-database	Multicast group database from MVR
	interface	Search by port
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	PORT_LIST, Port list in 1/1-8
	sfm-information	Including source filter multicast information from MVR
	detail	Detail information/statistics of MVR group database

2.2.55 show fdb static table

Description	Show static MAC forwarding table.
Syntax	show mac address-table static
Parameter	None

2.2.56 show fdbstatic interface gigabit <portNo>

Description	Show static MAC forwarding table per gigabit port.	
Syntax	Show mac address-table { learning | count } [interface <port_type> [<port_type_list>]]	
Parameter		
	Name	Description
	<port_type>	Port type in Fast, Giga or Tengiga ethernet
	<portNo>	Valid values: 1 ~ 10 Type: Mandatory

2.2.57 show fdbstatic vlan <vlanid>

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

2.2.58 show interface port < port_type_list >

Description	Show interface information per \port.	
Syntax	show interface <port_type> [<port_type_list>] status	
Parameter		
	Name	Description
	<port_type>	Port type in Fast, Giga or Tengiga ethernet
	<portNo>	Valid values: 1 ~ 10 Type: Mandatory

2.2.59 show interface port <portNo> statistics

Description	Show Ethernet counter per gigabit port.	
Syntax	show interface <port_type> [<port_type_list>] statistics	
Parameter		
	Name	Description
	<port_type>	Port type in Fast, Giga or Tengiga ethernet
	<portNo>	Valid values: 1 ~ 10 Type: Mandatory
	counter	Show Gigabit Ethernet counter.

2.2.60 show platform phy

Description	PHYs' information
Syntax	show platform phy [interface (<port_type> [<v_port_type_list>])] show platform phy id [interface (<port_type> [<v_port_type_list>])] show platform phy instance

	show platform phy status [interface (<port_type> [<v_port_type_list>])]
Parameter	

Name	Description
id	ID
instance	PHY Instance Information
status	Status
interface	Interface
port_type	GigabitEthernet, 1 Gigabit Ethernet Port
v_port_type_list	PORT_LIST, Port list in 1/1-8

2.2.61 show port-security

Description	Port security
Syntax	show port-security
Parameter	

Name	Description
port	Show MAC Addresses learned by Port Security
switch	Show Port Security status
interface	Interface
port_type	GigabitEthernet, 1 Gigabit Ethernet Port
v_port_type_list	PORT_LIST, Port list in 1/1-8

2.2.62 show profile alarm

Description	Profile alarm
Syntax	show profile alarm
Parameter	None

2.2.63 show sflow

Description	Sflow information	
Syntax	show sflow show sflow statistics { receiver [<rcvr_idx_list>] | samplers [interface [<samplers_list>] (<port_type> [<v_port_type_list>])] }	
Parameter		
	Name	Description
	receiver	Show statistics for receiver
	samplers	Show statistics for samplers
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	v_port_type_list	<port_type_list> Port list in 1/1-8

2.2.64 show snmp

<table>
<tr><th>Description</th><th colspan="2">SNMP information</th></tr>
<tr><td>Syntax</td><td colspan="2">show snmp

show snmp access [<group_name> { v1 | v2c | v3 | any } { auth | noauth | priv }]

show snmp community v3 [<community>]

show snmp host [<conf_name>] [system] [switch] [interface] [aaa]

show snmp mib context

show snmp mib ifmib ifIndex

show snmp security-to-group [{ v1 | v2c | v3 } <security_name>]

show snmp user [<username> <engineID>]

show snmp view [<view_name> <oid_subtree>]</td></tr>
<tr><td>Parameter</td><td colspan="2"></td></tr>
<tr><td></td><td>Name</td><td>Description</td></tr>
<tr><td></td><td>access</td><td>access configuration</td></tr>
<tr><td></td><td>group_name</td><td><GroupName : word32> group name</td></tr>
<tr><td></td><td>any</td><td>any security model</td></tr>
<tr><td></td><td>v1</td><td>v1 security model</td></tr>
<tr><td></td><td>v2c</td><td>v2c security model</td></tr>
<tr><td></td><td>v3</td><td>v3 security model</td></tr>
<tr><td></td><td>auth</td><td>authNoPriv Security Level</td></tr>
<tr><td></td><td>noauth</td><td>noAuthNoPriv Security Level</td></tr>
<tr><td></td><td>priv</td><td>authPriv Security Level</td></tr>
<tr><td></td><td>community</td><td>Community</td></tr>
<tr><td></td><td>community</td><td><Community : word127> Specify community name</td></tr>
<tr><td></td><td>host</td><td>Set SNMP host's configurations</td></tr>
<tr><td></td><td>conf_name</td><td><ConfName : word32> Name of the host configuration</td></tr>
</table>

	aaa	AAA event group
	interface	Interface event group
	switch	Switch event group
	system	System event group
	mib	MIB(Management Information Base)
	context	MIB context
	ifmib	IF-MIB
	ifIndex	The IfIndex that is defined in IF-MIB
	security-to-group	security-to-group configuration
	security_name	<SecurityName : word32> security group name
	user	User
	username	<Username : word32> Security user name
	engineID	<Engiedid : word10-32> Security Engine ID
	view	MIB view configuration
	view_name	<ViewName : word32> MIB view name
	oid_subtree	<OidSubtree : word255> MIB view OID

2.2.65 show spanning-tree

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

	summary	STP summary

2.2.66 show switchport forbidden

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

2.2.67 show vlan

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

2.2.68 show vlan ID

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

2.2.69 show vlan name

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

2.2.70 show vlan brief

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

2.2.71 show vlan ip-subnet

Description	Show VLAN ip-subnet entries	
Syntax	show vlan ip-subnet [id <subnet_id>]	
Parameter		
	Name	Description
	id	Show a specific ip-subnet entry
	subnet_id	<1-128> The specific ip-subnet to show

2.2.72 show vlan mac

Description	Show VLAN MAC entries	
Syntax	show vlan mac [address <mac_addr>]	
Parameter		
	Name	Description
	address	Show a specific MAC entry
	mac_addr	<mac_ucast> The specific MAC entry to show

2.2.73 show vlan protocol

Description	Protocol-based VLAN status	
Syntax	show vlan protocol [eth2 { <etype> | arp | ip | ipx | at }] [snap { <oui> | rfc-1042 | snap-8021h } <pid>] [llc <dsap> <ssap>]	
Parameter		
	Name	Description
	eth2	Ethernet protocol based VLAN status
	etype	0x600-0xffff> Ether Type(Range: 0x600 - 0xFFFF)
	arp	Ether Type is ARP
	ip	Ether Type is IP
	ipx	Ether Type is IPX
	at	Ether Type is AppleTalk
	llc	LLC-based VLAN status
	dsap	<0x0-0xff> DSAP (Range: 0x00 - 0xFF)
	ssap	<0x0-0xff> SSAP (Range: 0x00 - 0xFF)
	snap	SNAP-based VLAN status
	oui	<0x0-0xffffff> SNAP OUI (Range 0x000000 - 0XFFFFFF)
	rfc-1042	SNAP OUI is rfc-1042
	snap-8021h	SNAP OUI is 8021h

2.2.74 show vlan status

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

2.2.75 show qos-queue-mapping

Description	Show CoS queue mapping table.
Syntax	show qos maps
Parameter	None

2.2.76 show interface ports <portNo> priority

Description	Show QoS per gigabit port.	
Syntax	show interface <port_type> [<port_type_list>] statistics { priority [<0~7>] }	
Parameter		
	Name	Description
	priority [<0~7>]	Valid values:0 ~7 Type: Mandatory
	<port_type>	Port type in Fast, Giga or Tengiga ethernet
	<portNo>	Valid values:0 ~ 10 Type: Mandatory

2.2.77 show queue-shaper

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

2.2.78 show port-shaper

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

2.2.79 show pvlan [<pvlan_list>]

Description	PVLAN ID	
Syntax	show pvlan [<pvlan_list>]	
Parameter		
	Name	Description
	pvlan_list	PVLAN ID to show configuration for

2.2.80 show pvlan isolation [interface <port_type> [<port_type_list>]]

Description	Show all port isolation information.	
Syntax	show pvlan isolation [interface <port_type> [<port_type_list>]]	
Parameter	None	
	Name	Description
	<port_type>	Port type in Fast, Giga or Tengiga ethernet
	<portNo>	Valid values: 1 ~ 10 Type: Mandatory

2.2.81 show interface gigabit <portNo> port-isolation

Description	Show isolation information per gigabit port.	
Syntax	show pvlan isolation [interface <port_type> [<port_type_list>]]	
Parameter		
	Name	Description
	<portNo>	Valid values: 1 ~ 10 Type: Mandatory

2.2.82 show qos interface

Description	QoS interface information	
Syntax	show qos [{ interface [(<port_type> [<port>])] }	
Parameter		
	Name	Description
	interface	Interface
	port_type	GigabitEthernet, 1 Gigabit Ethernet Port
	port	PORT_LIST, Port list in 1/1-8

2.2.83 show qos maps

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

2.2.84 show qos qce

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

2.2.85 show qos storm

Description	Show QoS storm policer information
Syntax	show qos storm
Parameter	None

2.2.86 show ringv2

Description	Show ring protect information
Syntax	show ring
Parameter	None

2.2.87 show rmon

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

2.2.88 show ext-tpid

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

2.2.89 show interface vlan

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

2.2.90 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

2.2.91 show protocol-vlan

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

2.2.92 show interface gigabit <portNo> vlan

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

2.2.93 show vlan-trans

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

2.2.94 show multicast-fdb

Description	Show IGMP group membership table
Syntax	show multicast-fdb
Parameter	None

2.2.95 show dot1x

Description	Show dot1x information
Syntax	show dot1x
Parameter	None

2.2.96 show dot1x status

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

2.2.97 show rfc2544 profile [<word32>]

Description	show rfc2544 profile name
Syntax	show rfc2544 profile [<word32>]

Parameter		
	Name	Description
	<word32>	rfc2544 profile name

2.2.98 Configuration save and replace

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

2.2.99 clearipigmp snoopingstatistics

Description	clear ipigmpsnoopingstatisti	
Syntax	clear ipigmp snooping [vlan<vlan_list>] statistics	
Parameter		
	Name	Description
	vlan_list	VLAN list.

2.2.100 debug

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

2.2.101 delete

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

2.2.102 help

Description	Description of the interactive help system
Syntax	help
Parameter	

2.2.103 show web

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

2.3 Configure Mode Commands

Commands that can be executed under Configure Mode

2.3.1 interface gigabit <portNo>

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

2.3.2 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

2.3.3 access

Description	Management configuration	
Syntax	access management	
Parameter		
	Name	Description
	management	Access management configuration

2.3.4 aggregation mode

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

2.3.5 alarm history clear

Description	Clear alarm history	
Syntax	alarm history clear	
Parameter	Name	Description

2.3.6 banner

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

2.3.7 default access-list rate-limiter

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

2.3.8 profile sch

Description	Enter Scheduling Profile Config Mode
Syntax	profile sch
Parameter	None

2.3.9 ntp server <1-5> ip-address <ip>

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

2.3.10 clock timezone

Description	Set time zone.	
Syntax	clock timezone <word16> <-23-23> [<0-59>]	
Parameter		
	Name	Description
	< word16>	Valid values: please see 'list timezone' Type: Mandatory
	default	Set time zone to default (GMT/UTC). Type: Mandatory

2.3.11 clock summer-time set [start-time] [end-time]

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

2.3.12 account add <username>

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

2.3.13 account delete <username>

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

2.3.14 syslog {enable|disable}

Description	Disable or enable syslog service.
Syntax	logging on no logging on
Parameter	None

2.3.15 clear logging

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

2.3.16 clear mac address-table

Description	clear MAC address-table
Syntax	clear mac address-table
Parameter	

2.3.17 dir

Description	Directory of all files in flash: file system
Syntax	dir
Parameter	

2.3.18 do

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

2.3.19 duplex

Description	Set duplex mode Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	duplex { half | full | auto [half | full] }	
Parameter		
	Name	Description
	half	Forced half duplex.
	full	Forced full duplex.
	auto	Auto negotiation of duplex mode.
	[half | full]	Advertise half /full duplex.

2.3.20 firmware

Description	Firmware swap and upgrade	
Syntax	firmware { swap | upgrade }	
Parameter		
	Name	Description
	swap	Swap between Active and Alternate firmware image
	upgrade	Firmware upgrade

2.3.21 flowcontrol

Description	Enable/Disable flow control. Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.
Syntax	flowcontrol { on | off }
Parameter	

Name	Description
on	Enable flow control.
off	Disable flow control.

2.3.22 green-etherneteee

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

2.3.23 green-etherneteee optimize-for-power

Description	Set if EEE shall be optimized for least power consumption (else optimized for least traffic latency).
Syntax	green-etherneteee optimize-for-power
Parameter	

2.3.24 green-etherneteee urgent-queues

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

2.3.25 Ip arp inspection

Description	**IP Address Resolution Protocol inspection**
Syntax	ip arp inspection
Parameter	

2.3.26 Ip arp inspection translate

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

2.3.27 Ip arp inspection entry

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

2.3.28 ip arp inspection vlan

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

2.3.29 ip dns proxy

Description	IP DNS proxy service
Syntax	ipdns proxy
Parameter	

2.3.30 ip http server

Description	IP HTTP web server
Syntax	ip http server
Parameter	HTTP web server is disabled as default value

2.3.31 ip http secure-redirect

Description	IP http secure-redirect
Syntax	ip http secure-redirect
Parameter	Http secure-redirect is disabled as default value

2.3.32 ip http secure-server

Description	IP Secure HTTP web server
Syntax	ip http secure-server
Parameter	Secure HTTP web server is enabled as default value

2.3.33 ip source binding interface

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

2.3.34 ip ssh

Description	IP Secure Shell
Syntax	Ip ssh
Parameter	SSH service is disabled as default value

2.3.35 ip telnet

Description	Enable telnet
Syntax	ip telnet
Parameter	Telnet service is disabled as default value

2.3.36 ip name-server

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

2.3.37 ip route

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

2.3.38 ip routing

Description	IP routing
Syntax	ip routing
Parameter	

2.3.39 ip verify

Description	IP verify	
Syntax	ip verify [source] [translate]	
Parameter		
	Name	Description
	source	verify source
	translate	ip verify source translate all entries

2.3.40 ipmc profile

Description	IPMC profile configuration
Syntax	ipmc profile
Parameter	

2.3.41 ipmc range

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

2.3.42 LACP

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

2.3.43 line

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

2.3.44 login host

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

2.3.45 login level

Description	Log level	
Syntax	logging level { info | warning | error }	
Parameter		
	Name	Description
	error	Error
	info	Information
	warning	Warning

2.3.46 login on

Description	Log on
Syntax	logging on
Parameter	

2.3.47 logout

Description	System logout
Syntax	logout
Parameter	

2.3.48 mac address-table aging-time

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

2.3.49 mac address-table static

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

2.3.50 more

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

2.3.51 no

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

2.3.52 ping

Description	The ping function	
Syntax	ping { ip | ipv6 }	
Parameter		
	Name	Description
	ip	IP (ICMP) echo
	ipv6	IPv6 (ICMPv6) echo

2.3.53 port-security

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

2.3.54 privilege

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

	rfc2544-profile	RFC2544 Profile Mode
	snmps-host	SNMP Server Host Mode
	stp-aggr	STP Aggregation Mode

2.3.55 reload

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

2.3.56 rmon

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

2.3.57 rmon alarm

Description	RMON Alarm
Syntax	rmon alarm <id> <oid_str> <interval> { absolute | delta } rising-threshold <rising_threshold> [<rising_event_id>] falling-threshold <falling_threshold> [<falling_event_id>] { [rising | falling | both] }
Parameter	

Description	RMON Alarm	
	Name	Description
	id	Alarm entry ID
	ifInDiscards	The number of inbound packets that are discarded even the packets are normal
	fInErrors	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol
	ifInNUcastPkts	The number of broad-cast and multi-cast packets delivered to a higher-layer protocol
	ifInOctets	The total number of octets received on the interface, including framing characters
	ifInUcastPkts	The number of uni-cast packets delivered to a higher-layer protocol
	ifInUnknownProtos	The number of the inbound packets that were discarded because of the unknown or un-support protocol
	ifOutDiscards	The number of outbound packets that are discarded event the packets is normal
	ifOutErrors	The number of outbound packets that could not be transmitted because of errors
	ifOutNUcastPkts	The number of broad-cast and multi-cast packets that request to transmit
	ifOutOctets	The number of octets transmitted out of the interface, including framing characters
	ifOutUcastPkts	The number of uni-cast packets that request to

Description	RMON Alarm	
		transmit
	interval	Sample interval
	absolute	Test each sample directly
	delta	Test delta between samples
	rising_threshold	<-2147483648-2147483647> rising threshold value
	rising_event_id	<0-65535> Event to fire on rising threshold crossing
	falling_threshold	<-2147483648-2147483647> falling threshold value
	falling_event_id	<0-65535> Event to fire on falling threshold crossing
	both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
	falling	rigger alarm when the first value is less than the falling threshold
	rising	Trigger alarm when the first value is larger than the rising threshold

2.3.58 rmon alarm

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

2.3.59 terminal

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

2.3.60 vlan <vlanid>

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

2.3.61 vlan <vlanid> <name>

Description	Configure VLAN's name	
Syntax	vlan <vlanid> <name>	
Parameter		
	Name	2.3.61.1.1 Description
	<vlanid>	Create an empty VLAN index. Valid values: 1 ~ 4094 Type: Mandatory
	<name>	VLAN Name (0~31) String Size: 0~31 Type: Mandatory

2.3.62 vlan disable <vlanid>

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

2.3.63 aging <time>

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

2.3.64 jumboframe {enable | disable}

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

2.3.65

2.3.66 jumboframe mtu <value>

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

2.3.67 media-type

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

2.3.68 monitor destination interface

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

2.3.69 monitor source interface

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

2.3.70 monitor source cpu

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

2.3.71 speed

Description	Configures interface speed. If you use 10, 100, or 1000 keywords with the auto keyword the port will only advertise the specified speeds.	
Syntax	speed { 10g | 2500 | 1000 | 100 | 10 | auto { [10] [100] [1000] } }	
Parameter		
	Name	Description
	1000	1Gbps
	100	100Mbps
	10	10Mbps
	auto	Auto negotiation
	[10]	10Mbps
	[10 0]	100Mbps
	[1000]	1Gbps

2.3.72 traps

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

2.3.73 upnp

Description	Set UPnP's configurations
Syntax	upnp
Parameter	

2.3.74 upnp advertising-duration

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

2.3.75 upnp ttl

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

2.3.76 username

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

2.3.77 web

<table>
<tr><td>Description</td><td colspan="2"></td></tr>
<tr><td>Syntax</td><td colspan="2">web privilege group <group_name> level { [cro <cro>] [crw <crw>] [sro <sro>] [srw <srw>] }*1</td></tr>
<tr><td rowspan="15">Parameter</td><td colspan="2"></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td>privilege</td><td>Web privilege</td></tr>
<tr><td>group</td><td>Web privilege group</td></tr>
<tr><td>group_name</td><td>Valid words are 'Aggregation' 'DHCP' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow'</td></tr>
<tr><td>level</td><td>Web privilege group level</td></tr>
<tr><td>cro</td><td>Configuration Read-only level</td></tr>
<tr><td>crw</td><td>Configuration Read-write level</td></tr>
<tr><td>sro</td><td>Status/Statistics Read-only level</td></tr>
<tr><td>srw</td><td>Status/Statistics Read-write level</td></tr>
<tr><td>cro</td><td><Cro : 0-15></td></tr>
<tr><td>crw</td><td><Crw : 0-15></td></tr>
<tr><td>sro</td><td><Sro : 0-15></td></tr>
<tr><td>srw</td><td><Srw : 0-15></td></tr>
</table>

2.3.78 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.

2.3.79 speed

Description	Configure gigabit Ethernet speed and Copper/SFP for gigabit port 7~8. (port1~6 Only support copper, no SFP) (port 9, 10 only support auto)	
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.

2.3.80 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.

2.3.81 Date/Time

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

2.4 VLAN Commands (Configuration Mode)

2.4.1 vlan

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

2.4.2 vlan ethertype s-custom-port

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

2.4.3 vlan protocol

Description		
Syntax	vlan protocol { { eth2 { <0x600-0xffff> | arp | ip | ipx | at } } | { snap { <0x0-0xffffff> | rfc_1042 | snap_8021h } <0x0-0xffff> } | { llc <0x0-0xff> <0x0-0xff> } } group <word16>	
Parameter		
	Name	Description
	0x600-0xffff	Ether Type(Range: 0x600 - 0xFFFF)
	arp	Ether Type is ARP
	ip	Ether Type is IP
	ipx	Ether Type is IPX
	at	Ether Type is AppleTalk
	0x0-0xffffff	SNAP OUI (Range 0x000000 - 0XFFFFFF)
	rfc_1042	SNAP OUI is rfc_1042
	snap_8021h	SNAP OUI is 8021h
	0x0-0xffff	PID (Range: 0x0 - 0xFFFF)
	0x0-0xff	DSAP (Range: 0x00 - 0xFF)
	0x0-0xff	SSAP (Range: 0x00 - 0xFF)
	word16	Group Name (Range: 1 - 16 characters)

2.4.4 switchport access vlan

Description	Set switch access mode of the interface Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport access vlan <vlan_id>	
Parameter		
	Name	Description
	vlan_id	VLAN ID of the VLAN when this port is in access mode

2.4.5 switchport forbidden vlan

Description	Adds or removes forbidden VLANs from the current list of forbidden VLANs Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport forbidden vlan { add | remove } <vlan_list>	
Parameter		
	Name	Description
	add	Add to existing list.
	remove	Remove from existing list.
	vlan_list	VLAN IDs

2.4.6 switchport hybrid acceptable-frame-type

Description	Set acceptable frame type on a port Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport hybrid acceptable-frame-type { all | tagged | untagged }	
Parameter		
	Name	Description
	all	Allow all frames
	tagged	Allow only tagged frames
	untagged	Allow only untagged frames

2.4.7 switchport hybrid allowed vlan

Description	Set allowed VLAN characteristics when interface is in hybrid mode Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport hybrid allowed vlan { all | none | [add | remove | except] <vlan_list> }	
Parameter		
	Name	Description
	all	All VLANs
	none	No VLANs
	add	Add VLANs to the current list

	remove	Remove VLANs from the current list
	except	All VLANs except the following
	vlan_list	VLAN IDs of the allowed VLANs when this port is in hybrid mode

2.4.8 switchport hybrid egress-tag

Description	**Egress VLAN tagging configuration** **Note:** **This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.**	
Syntax	switchport hybrid egress-tag { none | all [except-native] }	
Parameter		
	Name	**Description**
	none	No egress tagging
	all	Tag all frames
	except-native	Tag all frames except frames classified to native VLAN of the hybrid port

2.4.9 switchport hybrid ingress-filtering

Description	VLAN Ingress filter configuration Note: This command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.
Syntax	switchport hybrid ingress-filtering
Parameter	

2.4.10 switchport mode

Description	Set switching mode This command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.	
Syntax	switchport mode { access | trunk | hybrid }	
Parameter		
	Name	Description
	access	Set mode to ACCESS unconditionally
	trunk	Set mode to TRUNK unconditionally
	hybrid	Set mode to HYBRID unconditionally

2.4.11 switchport trunk allowed vlan

Description	Set allowed VLAN characteristics when interface is in trunk mode Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport trunk allowed vlan { all | none | [add | remove | except] <vlan_list> }	
Parameter		
	Name	Description
	all	All VLANs
	none	No VLANs
	add	Add VLANs to the current list
	remove	Remove VLANs from the current list
	except	All VLANs except the following
	vlan_list	VLAN IDs of the allowed VLANs when this port is in trunk mode

2.4.12 switchport vlan protocol group

Description	Protocol-based VLAN group commands Note: This command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	switchport vlan protocol group <word16> vlan <vlan_id>	
Parameter		
	Name	Description
	word16	Group Name (Range: 1 - 16 characters)
	vlan_id	VLAN ID required for the group to VLAN mapping (Range: 1-4095)

2.5 DHCP Commands (Configuration Mode)

2.5.1 interface

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

2.5.2 interface vlan

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

2.5.3 ip address

Description	IPv4 address configurations Note: The command is only valid in "Vlan Interface Config Mode". Refer to section 1.8 for information to enter "Vlan Interface Config Mode" mode.
Syntax	ip address { { <ipv4_addr><ipv4_netmask> } | { dhcp [fallback <ipv4_addr><ipv4_netmask> [timeout <uint>]] } }
Parameter	

Name	Description
ipv4_addr	IP address
ipv4_netmask	IP netmask
dhcp	Enable DHCP
fallback	DHCP fallback settings
ipv4_addr	DHCP fallback address
ipv4_netmask	DHCP fallback netmask
timeout	DHCP fallback timeout
uint	DHCP fallback timeout in seconds

2.5.4 ip name-server

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

2.5.5 ip dhcp excluded-address

Description	Prevent DHCP from assigning certain addresses	
Syntax	ip dhcp excluded-address <low_ip> [<high_ip>]	
Parameter		
	Name	Description
	low_ip	Low IP address
	high_ip	High IP address

2.5.6 ip dhcp pool

Description	Pool name in 32 characters
Syntax	ip dhcp pool <pool_name>
Parameter	

2.5.7 ip dhcp server

Description	DHCP Server
Syntax	ip dhcp server
Parameter	

2.5.8 ip dhcp relay

Description	DHCP relay agent configuration
Syntax	ipdhcp relay
Parameter	

2.5.9 ip dhcp relay information option

Description	IP DHCP relay information option(Option 82)
Syntax	ipdhcp relay information option
Parameter	

2.5.10 ip dhcp retry interface vlan

Description	Restart the DHCP query process	
Syntax	ipdhcp retry interface vlan<vlan_id>	
Parameter		
	Name	Description
	vlan_id	Vlan ID

2.5.11 ip dhcp snooping

Description	IP DHCP snooping
Syntax	ipdhcp snooping
Parameter	

2.5.12 ip helper-address

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

2.5.13 ipv6 address

Description	Configure the IPv6 address of an interface Note: The command is only valid in “Vlan Interface Config Mode”. Refer to section 1.8 for information to enter “Vlan Interface Config Mode” mode.	
Syntax	ipv6 address <ipv6_subnet>	
Parameter		
	Name	Description
	ipv6_subnet	IPv6 prefix x:x::y/z

2.5.14 ipv6mtu

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

2.6 RingV2 Group Mode Commands (Configuration Mode)

2.6.1 ringv2 protect

Description	To configure ring protection.	
Syntax	ring protect	
Parameter		
	Name	Description
	group1	Configure ring protection v2 group1
	group2	Configure ring protection v2 group2
	group3	Configure ring protection v2 group3

Note: There are two databases in the switch, one is for web (runtime) configuration and the other is for PROFINET configuration. The Ring(index 1), and M-Chain (index 4,5) of the RingV2 configuration are defined by the PME and will be saved to the PROFINET database. The Ring/Coupling (index 2), and Chain(index 3) are configured by the Web server interface and will be saved to the Web database.

When the ring parameters have to be set through the web configuration only Ring/Coupling(index 2), and Chain(index 3) can be used and when the parameters have to be set via the PME application only Ring(index 1), M-Chain(index 4, 5) can be used.

2.6.2 guard-time

Description	Set guard time Note: This command is only valid in "RingV2 Group Config Mode". Refer to section 1.8 for information to enter "RingV2 Group Config Mode" mode.	
Syntax	guard-time { <ringGuardTimerDef> }	
Parameter		
	Name	Description
	ringGuardTimerDef	<10-3600>, unit: second. Default is 10 seconds

2.6.3 mode

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

2.6.4 node1 interface GigabitEthernet <portNo>}

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

2.6.5 node2 interface GigabitEthernet <portNo>}

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

2.6.6 role

Description	Set role for group
Syntax	role { ring-master | ring-slave | coupling-primary | coupling-backup | dual-homing | chain-head | chain-tail | chain-member | b-chain-terminal-1 | b-chain-terminal-2 | b-chain-central-block | b-chain-member}

Parameter		
	Name	Description
	ring-master	Set role to ring master
	ring-slave	Set role to ring slave
	coupling-primary	Set role to coupling primary
	coupling-backup	Set role to coupling backup
	dual-homing	Set role to dual homing
	chain-head	Set role to chain head
	chain-member	Set role to chain member
	chain-tail	Set role to chain tail
	b-chain-central-block	Set role to balancing chain central block
	b-chain-member	Set role to balancing chain member
	b-chain-terminal-1	Set role to balancing chain terminal 1
	b-chain-terminal-2	Set role to balancing chain terminal 2

2.7 Spanning Tree (configuration Mode)

2.7.1 spanning-tree

Description	Enable/disable STP on this interface Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree	
Parameter		
	Name	Description

2.7.2 spanning-tree aggregation

Description	Spanning Tree protocol	
Syntax	spanning-tree aggregation	
Parameter		
	Name	Description

2.7.3 spanning-tree auto-edge

Description	Auto detect edge status Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree auto-edge	
Parameter		
	Name	Description

2.7.4 spanning-tree bpdu-guard

Description	Enable/disable BPDU guard Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree bpdu-guard	
Parameter		
	Name	Description

2.7.5 spanning-tree edge

Description	Enable edge port Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree edge	
Parameter		
	Name	Description

2.7.6 spanning-tree edge bpdu-filter

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

2.7.7 spanning-tree mode

Description	**Configure Spanning-tree mode**	
Syntax	spanning-tree mode { stp | rstp | mstp }	
Parameter		
	Name	Description
	stp	802.1D Spanning Tree
	rstp	Rabid Spanning Tree (802.1w)
	mstp	Multiple Spanning Tree (802.1s)

2.7.8 spanning-tree mst cost

Description	Configure MSTP path cost parameter Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree mst <0-7> cost { <1-200000000> | auto }	
Parameter		
	Name	Description
	<0-7>	instance 0-7 (CIST=0, MST2=1…)
	<1-200000000>	STP Cost of this port

2.7.9 spanning-tree mst port-priority

Description	Configure MSTP port-priority Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	spanning-tree mst <0-7> port-priority <0-240>	
Parameter		
	Name	Description
	<0-7>	instance 0-7 (CIST=0, MST2=1…)
	<0-240>	STP priority of this port

2.7.10 spanning-tree mst priority

Description	**Configure MSTP priority** **The unit of priority is in seconds**	
Syntax	spanning-tree mst <0-7> priority <0-61440>	
Parameter		
	Name	Description
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<0-61440>	Priority of the instance

2.7.11 spanning-tree mst vlan

Description	Configure MSTP VLAN	
Syntax	spanning-tree mst <0-7> vlan <vlan_list>	
Parameter		
	Name	Description
	<0-7>	instance 0-7 (CIST=0, MST2=1...)
	<vlan_list>	Range of VLANs

2.7.12 spanning-tree mst forward-time

Description	**Configure MSTP forward-time** **Delay between port states**	
Syntax	spanning-tree mst forward-time <4-30>	
Parameter		
	Name	Description

	<4-30>	Delay between port states

2.7.13 spanning-tree mst max-age

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

2.7.14 spanning-tree mst max-hops

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

2.7.15 spanning-tree mst name

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

2.7.16 spanning-tree mst <instance>

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

2.7.17 spanning-tree recovery

Description	Configure the error recovery timeout	
Syntax	spanning-tree recovery interval <interval>	
Parameter		
	Name	Description
	interval	The interval
	interva	Interval : 30-86400> Range in seconds

2.7.18 spanning-tree transmit

Description	Configure max number of transmit BPDUs per second	
Syntax	spanning-tree transmit hold-count <holdcount>	
Parameter		
	Name	Description

	hold-count	Max number of transmit BPDUs per sec
	holdcount	<Holdcount : 1-10> 1-10 per sec, 6 is default

2.8 sFlow Configure Command (configuration Mode)

2.8.1 sflow

Description	Enables/disables flow sampling on this port. Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	sflow [<range_list>]	
Parameter		
	Name	Description
	< range_list >	Sampler instance

2.8.2 sflow agent-ip

Description	The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address.	
Syntax	sflow agent-ip { ipv4 <ipv4_addr> | ipv6 <ipv6_addr> }	
Parameter		
	Name	Description
	< ipv4_addr >	Ipv4 address
	< ipv6_addr>	ipv6 address

2.8.3 sflow collector-address

Description	Sflow runtime, see sflow_icli_functions	
Syntax	sflow collector-address [receiver <range_list>] [<word>]	
Parameter		
	Name	Description
	< range_list >	Sampler instance

2.8.4 sflow max-datagram-size

Description	Statistics flow Maximum datagram size.	
Syntax	sflow max-datagram-size [receiver <range_list>] <200-1468>	
Parameter		
	Name	Description
	<range_list>	receiver list
	<200-1468>	packet byte

2.8.5 sflow max-sampling-size

Description	Specifies the maximum number of bytes to transmit per flow sample. Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	sflow max-sampling-size [sampler <range_list>] [<14-200>]	
Parameter		
	Name	Description
	< range_list >	Sampler instance
	<200-1468>	packet byte

2.8.6 sflow collector-port

Description	Collector UDP port	
Syntax	sflow collector-port [receiver <rcvr_idx_list>] <collector_port>	
Parameter		
	Name	Description
	collector_port	<Collector Port : 1-65535> Port number

2.8.7 sflow sampling-rate

Description	Specifies the statistical sampling rate. The sample rate is specified as N to sample 1/Nth of the packets n the monitored flows. There are no restrictions on the value, but the switch will adjust it to the closest possible sampling rate. Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.
Syntax	sflow sampling-rate [sampler <range_list>] [<1-4294967295>]
Parameter	

Name	Description
< range_list >	Sampler instance
<1-4294967295>	Sampling rate

2.8.8 sflow timeout

Description	Receiver timeout measured in seconds. The switch decrements the timeout once per second, and as long as it is non-zero, the receiver receives samples. Once the timeout reaches 0, the receiver and all its configuration is reset to defaults.
Syntax	sflow timeout [receiver <range_list>] <0-2147483647>
Parameter	

Name	Description
< range_list >	Sampler instance
<0-2147483647>	Number of seconds.

2.9 SNMP Configure Command (Configuration Mode)

2.9.1 snmp-server

Description	Enable SNMP server	
Syntax	snmp-server	
Parameter		
	Name	Description

2.9.2 snmp-server access

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

2.9.3 snmp-server community v2c

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

2.9.4 snmp-server community v3

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

2.9.5 snmp-server host

Description	Set SNMP server's configurations	
Syntax	snmp-server host <word32>	
Parameter		
	Name	Description

	< word32 >	Name of the host configuration

2.9.6 snmp-server host traps

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

2.9.7 snmp-server trap

Description	Set SNMP server's configurations	
Syntax	snmp-server trap	
Parameter		
	Name	Description

2.9.8 snmp-server user

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

2.9.9 snmp-server version

Description	Set the SNMP server's version	
Syntax	snmp-server version { v1 | v2c | v3 }	
Parameter		
	Name	Description
	{ v1 | v2c | v3 }	SNMP v1,v2c,v3

2.9.10 snmp-server view

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

2.9.11 SNMP trap receive ipv6 host

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

2.9.12 snmp-server contac

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

2.9.13 snmp-server engine-id

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

2.9.14 snmp-server location

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

2.9.15 snmp-server security-to-group

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

2.9.16 SNMP trap receive ipv4 host

Description	host configuration	
Syntax	host { <ipv4_ucast> | <hostname> } [<1-65535>] [traps | informs]	
Parameter		
	Name	Description
	Ipv4_ucast	IP address of SNMP trap host
	hostname	hostname of SNMP trap host
	1-65535	UDP port of the trap messages
	traps	Send Trap messages to this host
	informs	Send Inform messages to this host

2.10 Qos Function Command (Configuration Mode)

2.10.1 qos qce

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

2.10.2 qos storm

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

2.10.3 qos cos

Description	Class of service configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	qos cos <0-7>	
Parameter		
	Name	Description
	<0-7>	Specific class of service

2.10.4 qos dscp-classify

Description	Set qos dscp-classify. Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	qos dscp-classify { zero | selected | any }	
Parameter		
	Name	Description

2.10.5 qos dscp-remark

Description	Set qos dscp-remark Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	qos dscp-remark { rewrite | remap | remap-dp }	
Parameter		
	Name	Description

2.10.6 qos dscp-translate

Description	Enable qos dscp-translate mode Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.
Syntax	qos dscp-translate

2.10.7 qos map cos-dscp

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

2.10.8 qos map cos-dscp

<table>
<tr><td>Description</td><td colspan="2">Configure dscp mapping to cos table</td></tr>
<tr><td>Syntax</td><td colspan="2">qos map dscp-cos { <0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } cos <0-7> dpl <dpl></td></tr>
<tr><td rowspan="15">Parameter</td><td colspan="2"></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td><0~7></td><td>Cos level</td></tr>
<tr><td><0-63></td><td>Dscp level</td></tr>
<tr><td>be</td><td>Default PHB(DSCP 0) for best effort traffic</td></tr>
<tr><td>af11~13</td><td>Assured Forwarding PHB 11~13(DSCP 10,12,14)</td></tr>
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<tr><td>va</td><td>Voice Admit PHB(DSCP 44)</td></tr>
<tr><td><0~1></td><td>Specific drop precedence level</td></tr>
<tr><td></td><td></td></tr>
</table>

2.10.9 qos map dscp-egress-translation

<table>
<tr><th>Description</th><th colspan="2">Configure dscp egress-translation</th></tr>
<tr><td>Syntax</td><td colspan="2">qos map dscp-egress-translation { <0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }
<0~1> to { <0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }</td></tr>
<tr><td rowspan="15">Parameter</td><td colspan="2"></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td><0~7></td><td>Cos level</td></tr>
<tr><td><0-63></td><td>Dscp level</td></tr>
<tr><td>be</td><td>Default PHB(DSCP 0) for best effort traffic</td></tr>
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<tr><td></td><td></td></tr>
</table>

2.10.10 qos map dscp-ingress-translation

<table>
<tr><th>Description</th><th colspan="2">Configure dscp ingress-translation</th></tr>
<tr><td>Syntax</td><td colspan="2">qos map dscp-ingress-translation { <0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } to { <0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }</td></tr>
<tr><td rowspan="14">Parameter</td><td colspan="2"></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td><0~7></td><td>Cos level</td></tr>
<tr><td><0-63></td><td>Dscp level</td></tr>
<tr><td>be</td><td>Default PHB(DSCP 0) for best effort traffic</td></tr>
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<tr><td>va</td><td>Voice Admit PHB(DSCP 44)</td></tr>
<tr><td><0~1></td><td>Specific drop precedence level</td></tr>
</table>

2.10.11 qos policer

Description	Configure qos policer Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	qos policer <unit> [fps] [flowcontrol]	
Parameter		
	Name	Description
	< unit >	Traffic meter
	< fps >	Frame rate
	[flowcontrol]	Enable flowcontrol mode

2.10.12 qos wrr

Description	Specifies qos wrr mode Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	qos wrr <1-100> <1-100> <1-100> <1-100> <1-100> <1-100>	
Parameter		
	Name	Description
	<1-100>	every level proportion

2.10.13 qos queue-shaper

Description	Configure queue-shaper command Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.	
Syntax	qos queue-shaper queue <0~7> <uint> [excess]	
Parameter		
	Name	Description
	<1-100>	every level proportion
	<unit>	Traffic meter
	[excess]	Agree the shaper could be excess or not

2.10.14 qos queue-policer

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

2.10.15 qos shaper <unit>

Description	Configure qos shaper command Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.	
Syntax	qos shaper <uint>	
Parameter		
	Name	Description
	<1-100>	every level proportion
	<unit>	Traffic meter

2.11 IGMP Functional Commands (Configuration Mode)

2.11.1 ip igmp host-proxy [leave-proxy]

Description	IGMP proxy for leave configuration	
Syntax	ipigmp host-proxy [leave-proxy]	
Parameter		
	Name	Description
	leave-proxy	IGMP proxy for leave

2.11.2 ip igmp snooping

Description	Snooping igmp
Syntax	ipigmp snooping
Parameter	

2.11.3 ip igmp snooping immediate-leave

Description	IP IGMP snooping immediate leave configuration Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.
Syntax	ipigmp snooping immediate-leave
Parameter	

2.11.4 ip igmp snooping last-member-query-interval

Description	IP IGMP snooping Last Member Query Interval in tenths of seconds Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.	
Syntax	ipigmp snooping last-member-query-interval <0-31744>	
Parameter		
	Name	Description
	0-31744	0 - 31744 tenths of seconds

2.11.5 ip igmp snooping max-groups

Description	IGMP group throttling configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	ipigmp snooping max-groups <1-10>	
Parameter		
	Name	Description
	1-10	Maximum number of IGMP group registration

2.11.6 ip igmp snooping mrouter

Description	IPIGMP snooping Multicast router port configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.
Syntax	ipigmp snooping mrouter
Parameter	

2.11.7 ip igmp snooping querier

Description	IP IGMP querier configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	ipigmp snooping querier { election | address <ipv4_ucast> }	
Parameter		
	Name	Description
	election	Act as an IGMP Querier to join Querier-Election
	address	IGMP Querier address configuration
	ipv4_ucast	A valid IPv4 unicast address

2.11.8 ip igmp snooping query-interval

Description	IP IGMP snooping Query-Intervalin seconds Note: The command is only valid in "Gigabit Interface Confi Mode". Refer to section 1.8 for information to ente "Gigabit Interface Config Mode" mode.	
Syntax	Ip igmp snooping query-interval <1-31744>	
Parameter		
	Name	Description
	1-317	1 - 31744 seconds

2.11.9 ip igmp snooping vlan

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

2.11.10 ip igmp ssm-range

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

2.11.11 ip igmp unknown-flooding

Description	IP IGMP flooding unregistered IPv4 multicast traffic
Syntax	ipigmp unknown-flooding
Parameter	

2.11.12 clear ip igmp snooping statistics

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

2.12 MVR Functional Commands (Configuration Mode)

2.12.1 mvr

Description	Multicast VLAN Registration configuration	
Syntax	mvr	
Parameter		
	Name	Description

2.12.2 mvr immediate-leave

Description	mvr immediate leave configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	mvr immediate-leave	
Parameter		
	Name	Description

2.12.3 mvr name channel

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

2.12.4 mvr frame priority

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

2.12.5 mvr name <word16> frame tagged

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

2.12.6 mvr name <word16> igmp-address <ipv4_ucast>

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

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

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

2.12.8 mvr name <word16> mode

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

2.12.9 mvr name <word16> type

Description	MVR port role configuration Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode” mode.	
Syntax	mvr name <word16> type { source | receiver }	
Parameter		
	Name	Description
	source	MVR source port
	receiver	MVR receiver port

2.12.10 mvr vlan

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

2.12.11 mvr vlan <vlan_list> channel

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

2.12.12 mvr vlan <vlan_list> frame priority

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

2.12.13 mvr vlan <vlan_list> frame tagged

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

2.12.14 mvr vlan <vlan_list> igmp-address

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

2.12.15 mvr vlan <vlan_list> mode

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

2.12.16 mvr vlan <vlan_list> type

Description	MVR vlan role configuration Note: The command is only valid in "Gigabit Interface Config Mode". Refer to section 1.8 for information to enter "Gigabit Interface Config Mode" mode.	
Syntax	mvr vlan <vlan_list> type { source | receiver }	
Parameter		
	Name	Description
	< vlan_list >	MVR multicast VLAN list
	source	MVR source port
	receiver	MVR receiver port

2.13 MLD Functional Commands (Configuration Mode)

2.13.1 ipv6 mld host-proxy

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

2.13.2 ipv6 mld snooping

Description	ipv6 mld snooping
Syntax	ipv6 mld snooping
Parameter	

2.13.3 ipv6 mld snooping compatibility

Description	IPv6 MLD snooping compatibility configuration Note: The command is only valid in “Vlan Interface Config Mode”. Refer to section 1.8 for information to enter “Vlan Interface Config Mode”.	
Syntax	ipv6 mld snooping compatibility { auto | v1 | v2 }	
Parameter		
	Name	Description
	auto	Compatible with MLDv1/MLDv2
	v1	Forced MLDv1
	v2	Forced MLDv2

2.13.4 ipv6 mld snooping immediate-leave

Description	IPv6 MLD snooping immediate-leave configuration Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode”.
Syntax	ipv6 mld snooping immediate-leave
Parameter	

2.13.5 ipv6 mld snooping last-member-query-interval

Description	ipv6 mld snooping last member query interval in tenths of seconds Note: The command is only valid in “Vlan Interface Config Mode”. Refer to section 1.8 for information to enter “Vlan Interface Config Mode”.	
Syntax	ipv6 mld snooping last-member-query-interval <0-31744>	
Parameter		
	Name	Description
	0-31744	0 - 31744 tenths of seconds

2.13.6 ipv6 mld snooping max-groups

Description	IPv6 MLD group throttling configuration Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode”.	
Syntax	ipv6 mld snooping max-groups <1-10>	
Parameter		
	Name	Description
	1-10	Maximum number of MLD group registration

2.13.7 ipv6 mld snooping mrouter

Description	IPv6 MLD group throttling configuration Note: The command is only valid in “Gigabit Interface Config Mode”. Refer to section 1.8 for information to enter “Gigabit Interface Config Mode”.
Syntax	ipv6 mld snooping mrouter
Parameter	

2.13.8 ipv6 mld snooping query-interval

Description	IPv6 MLD snooping query interval in seconds Note: The command is only valid in “Vlan Interface Config Mode”. Refer to section 1.8 for information to enter “Vlan Interface Config Mode”.	
Syntax	ipv6 mld snooping query-interval <1-31744>	
Parameter		
	Name	Description
	1-31744	1 - 31744 seconds

2.13.9 ipv6 mld snooping query-max-response-time

Description	IPv6 MLD snooping querymaxresponse interval in tenths of seconds Note: The command is only valid in “Vlan Interface Config Mode”. Refer to section 1.8 for information to enter “Vlan Interface Config Mode”.	
Syntax	ipv6 mld snooping query-max-response-time <0-31744>	
Parameter		
	Name	Description
	0-31744	0 - 31744 tenths of seconds

2.13.10 ipv6 mld snooping vlan

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

2.13.11 ipv6 mld ssm-range

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

2.13.12 ipv6 mld unknown-flooding

Description	Flooding unregistered IPv6 multicast traffic
Syntax	ipv6 mld unknown-flooding
Parameter	

2.13.13 ipv6 route

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

2.14 LLDP Configure Commands (Configuration Mode)

2.14.1 lldp holdtime

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

2.14.2 lldp med

<table>
<tr><td>Description</td><td colspan="2">LLDP MED</td></tr>
<tr><td>Syntax</td><td colspan="2">See Description</td></tr>
<tr><td rowspan="4">Parameter</td><td></td><td></td></tr>
<tr><td>Name</td><td>Description</td></tr>
<tr><td>datum</td><td>Datum (geodetic system) type

<table><tr><td>nad83-mllw</td><td>Mean lower low water datum 1983</td></tr><tr><td>nad83-navd88</td><td>North American vertical datum 1983</td></tr><tr><td>wgs84</td><td>World Geodetic System 1984</td></tr></table></td></tr>
<tr><td>fast</td><td>Number of times to repeat LLDP frame transmission at fast start

<v_1_to_10> : <1-10></td></tr>
<tr><td>location-tlv</td><td>LLDP-MED Location Type Length Value parameter

<table><tr><td>altitude</td><td>Altitude parameter</td></tr><tr><td>civic-addr</td><td>Civic address information and postal information</td></tr><tr><td>elin-addr</td><td>Emergency Location Identification Number, (e.g. E911 and others), such as defined by TIA or NENA.</td></tr></table></td></tr>
</table>

		latitude: Latitude parameter longitude: Longitude parameter
	media-vlan-policy	Use the media-vlan-policy to create a policy, which can be assigned to an interface <Index : 0-31> : Policy id for the policy which is created

2.14.3 lldp receive

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

2.14.4 lldp reinit <1-10>

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

2.14.5 lldp timer <5-32768>

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

	<5-32768>	5-32768 seconds.

2.14.6 lldp tlv-select

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

2.14.7 lldp transmission-delay

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

2.14.8 lldp transmit

Description	Enable/Disabled transmission of LLDP frames.
Syntax	lldp transmit
Parameter	

2.15 GVRP Configure Commands (Configuration Mode)

2.15.1 gvrp

Description	Enable GVRP on port(s)
Syntax	gvrp
Parameter	

2.15.2 cgvrpjoin request vlan

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

2.15.3 gvrpleave request vlan

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

2.15.4 gvrp max-vlans

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

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

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

2.16 Profile alarm Commands (Configuration Mode)

2.16.1 profile alarm

Description	Profile alarm
Syntax	profile alarm
Parameter	

2.16.2 alarm

Description	Set alarm content	
Syntax	alarm <alarmId> { mask | unmask | major | minor }	
Parameter	101~108: GE-1~8 Port link down	
	Name	Description
	alarmId	151: set Power alarm
	mask	Set alarm as a mask, it means the event will not be sent a notification
	unmask	Set alarm as un-mask, it means the event will be sent a notification
	major	Set alarm level as major
	minor	Set alarm level as minor

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Customer Care (Quotes/Orders/Returns): customercare.mas@emerson.com
Technical Support: support.mas@emerson.com

Europe
Phone: +800-4444-8001
+420-225-379-328 (If toll free option is unavailable)

Customer Care (Quotes/Orders/Returns): customercare.emea.mas@emerson.com
Technical Support: support.mas.emea@emerson.com

Asia
Phone: +86-400-842-8599
+65-6955-9413 (All other Countries)

Customer Care (Quotes/Orders/Returns): customercare.cn.mas@emerson.com
Technical Support: support.mas.apac@emerson.com

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