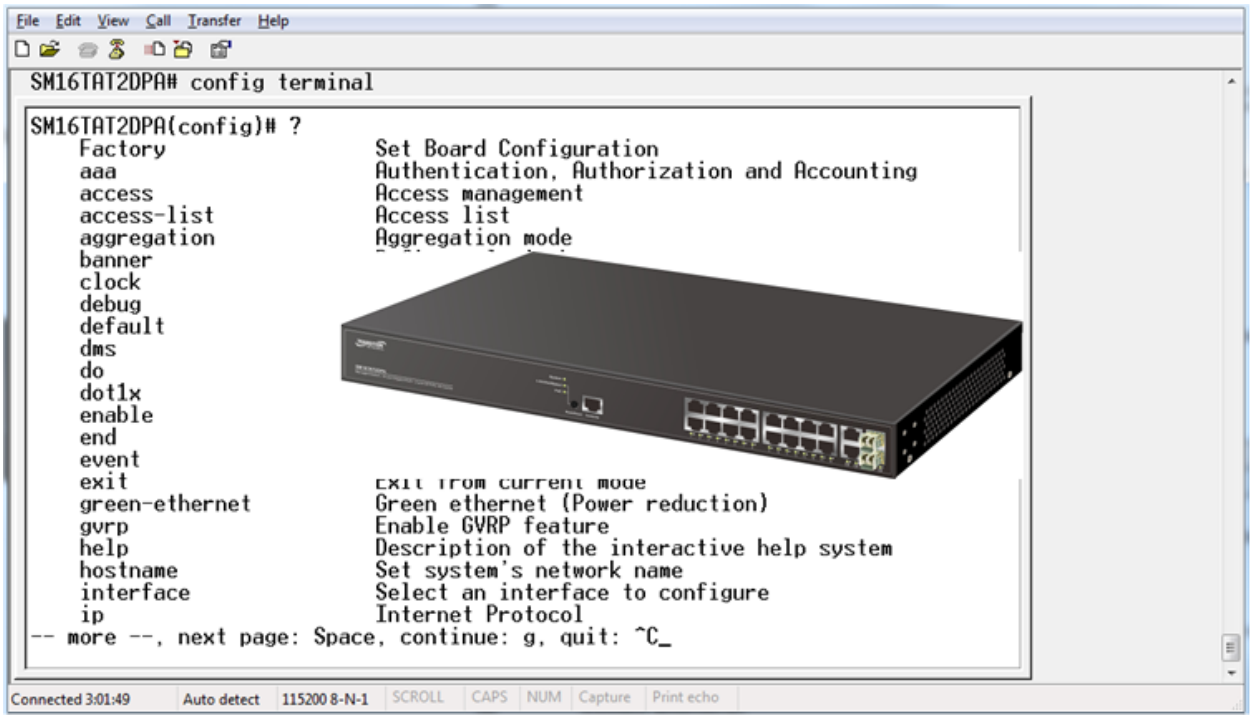
SM16TAT2DPA

16-Port L2 PoE Plus Managed Switch



CLI Reference

33663 Rev. B

Safety Warnings and Cautions

These products are not intended for use in life support products where failure of a product could reasonably be expected to result in death or personal injury. Anyone using this product in such an application without express written consent of an officer of Transition Networks does so at their own risk, and agrees to fully indemnify Transition Networks for any damages that may result from such use or sale.

 **Attention**: this product, like all electronic products, uses semiconductors that can be damaged by ESD (electrostatic discarge). Always observe appropriate precautions when handling.

 **NOTE:** Emphasizes important information or calls your attention to related features or instructions.

 **WARNING:** Alerts you to a potential hazard that could cause personal injury.

 **CAUTION:** Alerts you to a potential hazard that could cause loss of data, or damage the system or equipment.

SM16TAT2DPA CLI Reference - TN PN 33663 Rev. B

Record of Revisions

Rev	Date	Description of Changes
A	1/5/16	Initial release for software v6.41.
B	4/8/16	Updated for software v 6.46.

Address comments on this product or manual to:
Transition Networks Inc.
10900 Red Circle Drive, Minnetonka, MN 55343
Telephone: +1-952-941-7600 / Toll Free: 800-526-9267 / Fax: 952-941-2322
E-Mail: customerservice@transition.com / techsupport@transition.com sales@transition.com / info@transition.com

Contents

1 CLI Management

1-1 Introduction

This guide gives specific information on how to operate and use the management functions of the switch.

The guide is intended for use by network administrators who are responsible for operating and maintaining network equipment; consequently, it assumes a basic working knowledge of general switch functions, the Internet Protocol (IP), and Simple Network Management Protocol (SNMP).

1-2 CLI Connection

This section provides a brief descriptionf of the network connection.

-- Locate the correct DB-9 (RS-232) cable with female DB-9 connector. RS-232 cable is used for connecting a terminal or termial emulator to the Managed Switch's RJ45 port to access the command-line interface.

-- Attach the RJ45 serial port on the switch's front panel which used to connect to the switch for console configuration.

-- Attach the other end of the DB-9 cable to an ASCII terminal emulator or PC Com-1, 2 port. For example, a PC running Microsoft Windows HyperTerminal utility.

-- At "Com Port Properties" Menu, configure the parameters as below: (see the next section).

Baud rate	115200
Stop bits	1
Data bits	8
Parity	N
Flow control	none

1-3 Login

The command-line interface (CLI) is a text-based interface. You can access the CLI through either a direct serial connection to the device or a Telnet session. The default uaser and password to login into the Managed Switch are listed below:

Username: admin

Password: admin

After you login successfully, the prompt will be shown as “<sys_name>#“ . This means you are treated as an administrator and have the privilege for setting the Managed Switch. If logged in as other than the administrator, the prompt will be shown as “<sys_name>>”, meaning you are treated as a guest and are only allowed for setting the system under the administrator. Each CLI command has its own privilege level.

```
Username: admin
Password: admin
SM16TAT2DPA#
```

1-4 Related Manuals

The following documentation gives specific information on how to install, operate and use the switch:

- SM16TAT2DPA Quick Start Guide, 33671
- SM16TAT2DPA Install Guide, 33661
- SM16TAT2DPA Web User Guide, 33662

To access the manuals, firmware, datasheet or other documentation for your product, enter your model number (SM16TAT2DPA) in the “Search” box on our website at www.transition.com.

Firmware Version Descriptions

Firmware Version V6.46.1860:

- Change the default configuration of Bonjour Discovery to disabled.
- Add online Help for the Bonjour Discovery.
- Sflow configuration will be reset when timeout value is counting to 0.
- The save config can not be executed during firmware upgrade to avoid flash read/write conflict.
- DHCP Server Global mode will be disabled when changing Gateway IP from DMS page.
- With DMS enabled, VLAN port role will be changed when the port state becomes link down.

1-5 CLI Commands

The CLI is divided into serveral modes. If a user has enouth privilege to run a particular command, the user has to run the command in the correct mode. To see the commands of the mode, please input "**?**" after the system prompt, then all commands will be listed in the screen. The command modes are listed as belows:

Command Modes

Mode	Prompt	Command Function in This Mode
exec	<sys_name>#	Display current config, diagnostics, maintenance
config	<sys_name>(config)#	Configure features other than those below
Config-if	<sys_name>(config-interface)#	Configure ports
Config-if-vlan	<sys_name>(config-if-vlan)#	Configure static vlan
Config-line	<sys_name>(config-line)#	Line Configuration
Config-impc-profile	<sys_name>(config-impc-profile)#	IPMC Profile
Config-snmp-host	<sys_name>(config-snmp-host)#	SNMP Server Host
Config-stp-aggr	<sys_name>(config-stp-aggr)#	STP Aggregation
Config-dhcp-pool	<sys_name>(config-dhcp-pool)#	DHCP Pool Configuration
Config-rfc2544-profile	<sys_name>(config-rfc2544-profile)#	RFC2544 Profile

Commandsreside in the corresponding modes could runonly in that mode. If a user wants to run a particular command, the user has to change to the appropriate mode. The command modes are organized as a tree, and users start to in enable mode. The following table explains how to change from one mode to another.

Change Between Command Modes

Mode	Enter Mode	Leave Mode
exec	--	--
config	Configure terminal	exit
config-interfcae	Interface <port-type> <port-type-list>	exit
config-vlan	Interface vlan <vlan_list>	exit

1-5 Global CLI Commands

The global mode CLI commands are shown below:

```
SM16TAT2DPA# ?
    clear         Reset functions
    configure     Enter configuration mode
    copy          Copy from source to destination
    debug         Debugging functions
    delete        Delete one file in flash: file system
    dir           Directory of all files in file system
    disable       Turn off privileged commands
    do            To run exec commands in config mode
    dot1x         IEEE Standard for port-based Network Access Control
    enable        Turn on privileged commands
    exit          Exit from EXEC mode
    firmware      Firmware upgrade/swap
    help          Description of the interactive help system
    ip            IPv4 commands
    logout        Exit from EXEC mode
    more          Display file
    no            Negate a command or set its defaults
    ping          Send ICMP echo messages
    reload        Reload system.
    send          Send a message to other tty lines
    show          Show running system information
    terminal      Set terminal line parameters
    traceroute    traceroute program
SM16TAT2DPA#
```

Exit

Exit from EXEC mode.

Syntax:

exit

Parameter:

None.

Example:

```
SM16TAT2DPA(config)# exit
SM16TAT2DPA#
```

Help

Description of the interactive help system.

Syntax:

help

Parameter:

None.

Example:

```
SM16TAT2DPA# help
Help may be requested at any point in a command by entering
a question mark '?'.  If nothing matches, the help list will
be empty and you must backup until entering a '?' shows the
available options.
Two styles of help are provided:
1. Full help is available when you are ready to enter a
   command argument (e.g. 'show ?') and describes each possible
   argument.
2. Partial help is provided when an abbreviated argument is entered
   and you want to know what arguments match the input
   (e.g. 'show pr?'.)

SM16TAT2DPA#
```

logout

Exit from EXEC mode.

Syntax:

logout

Parameter:

none

Example:

```
SM16TAT2DPA# logout


press ENTER to get started
```

end

Go back to EXEC mode.

Syntax:

end

Example:

```
(config)# end
SM16TAT2DPA#
```

2 CLEAR Commands

Table : CLEAR Commands

Command	Function
access	Access management
access-list	Access list
dot1x	IEEE Standard for port-based Network Access Control
ip	Interface Internet Protocol config commands
ipv6	IPv6 configuration commands
lacp	Clear LACP statistics
lldp	Clears LLDP statistics.
logging	Syslog
mac	MAC Address Table
mvr	Multicast VLAN Registration configuration
sflow	Statistics flow.
spanning-tree	STP Bridge
statistics	Clear statistics for a given interface

access

Access management.

Syntax:

clear access management statistics

Parameter:

management Access management configuration.

statistics Statistics data.

Example:

```
SM16TAT2DPA# clear access management statistics
SM16TAT2DPA#
```

access-list

Access list.

Syntax:

Clear access-list ace statistics

Parameter:

ace	Access list entry
statistics	Traffic statistics

Example:

```
SM16TAT2DPA# clear access-list ace statistics
SM16TAT2DPA#
```

dot1x

IEEE Standard for port-based Network Access Control.

Syntax

Clear dot1x statistics

Clear dot1x statistics interface GigabitEthernet < PORT_TYPE_LIST>

Parameter

statistics	Clears the statistics counters
interface	Interface
GigabitEthernet	1 Gigabit Ethernet Port
PORT_TYPE_LIST	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# clear dot1x statistics interface GigabitEthernet 1/1-18
SM16TAT2DPA#
```

ip

Interface Internet Protocol config commands

Syntax

clear ip arp

clear ip dhcp detailed statistics { server | client | snooping | relay | helper | all } [interface (<port_type> [<in_port_list>])]

clear ip dhcp relay statistics

clear ip dhcp server binding <ip>

clear ip dhcp server binding { automatic | manual | expired }

clear ip dhcp server statistics

clear ip dhcp snooping statistics [interface (<port_type> [<in_port_list>])]

clear ip igmp snooping [vlan <v_vlan_list>] statistics

clear ip statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]

Parameter

arp	Clear ARP cache
dhcp	Dynamic Host Configuration Protocol
igmp	Internet Group Management Protocol
statistics	Traffic statistics
relay	DHCP relay agent configuration
snooping	DHCP snooping
interface	Select an interface to configure
GigabitEthernet	1 Gigabit Ethernet Port
vlan	IPv4 traffic interface
<vlan_list>	VLAN identifier(s): VID

EXAMPLE

```
SM16TAT2DPA# clear ip arp
SM16TAT2DPA# clear ip dhcp detailed  statistics all interface GigabitEthernet 1/1-18
SM16TAT2DPA# clear  ip dhcp relay statistics
SM16TAT2DPA# clear ip dhcp server binding 192.168.1.11
SM16TAT2DPA# clear ip dhcp server binding automatic
SM16TAT2DPA# clear ip dhcp server statistics
SM16TAT2DPA# Clear ip dhcp snooping statistics interface GigabitEthernet 1/1-18
SM16TAT2DPA# clear ip igmp snooping vlan 1 statistics
SM16TAT2DPA# clear ip statistics system interface
SM16TAT2DPA# clear ip statistics system interface vlan 1 icmp icmp-msg 2
```

ipv6

IPv6 configuration commands.

Syntax

clear ipv6 mld snooping [vlan <v_vlan_list>] statistics

clear ipv6 neighbors

clear ipv6 statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]

Parameter

mld	Multicasat Listener Discovery
neighbors	Ipv6 neighbors
statistics	Traffic statistics
snooping	Snooping MLD
statistics	Running MLD snooping counters
vlan	Ipv6 interface traffic
<vlan_list>	VLAN identifier(s): VID
icmp	IPv6 ICMP traffic
icmp-msg	IPv6 ICMP traffic for designated message type
interface	Select an interface to configure
system	IPv6 system traffic
< 0~255>	ICMP message type ranges from 0 to 255

EXAMPLE

```
SM16TAT2DPA# clear ipv6 mld snooping vlan 3 statistics
SM16TAT2DPA# clear ipv6 neighbors
SM16TAT2DPA# Clear ipv6 statistics system icmp icmp-msg
2
```

lacp

Clear LACP statistics

Syntax

Clear lacp statistics

Parameter

statistics Clear all LACP statistics

EXAMPLE

```
SM16TAT2DPA# clear lacp statistics
SM16TAT2DPA#
```

lldp

Clears LLDP statistics.

Syntax

Clear lldp statistics

Clear lldp statistics| begin | exclude | include >< LINE >

Parameter

statistics Clears LLDP statistics.

| Output modifiers

begin Begin with the line that matches

exclude Exclude lines that match

include Include lines that match

<LINE> String to match output lines

EXAMPLE

```
SM16TAT2DPA# clear lldp statistics | begin LINE
SM16TAT2DPA#
```

logging

Syslog (system logging).

Syntax

clear logging [info] [warning] [error] [switch <switch_list>]

Parameter

error	Error
info	Information
warning	Warning

EXAMPLE

```
SM16TAT2DPA# clear logging info error warning
SM16TAT2DPA#
```

mac

MAC Address Table.

Syntax

Clear mac address-table

Parameter

address-table	Flush MAC Address table.

EXAMPLE

```
SM16TAT2DPA# clear mac address-table
SM16TAT2DPA#
```

mvr

Multicast VLAN Registration configuration.

Syntax

clear mvr [vlan <v_vlan_list> | name <mvr_name>] statistics

Parameter

name	MVR multicast name
statistics	Running MVR protocol counters
vlan	MVR multicast vlan
< word16>	MVR multicast VLAN name
<vlan_list>	MVR multicast VLAN list

EXAMPLE

```
SM16TAT2DPA# clear  mvr vlan 25 statistics
SM16TAT2DPA#
```

sflow

Statistics flow.

Syntax

clear sflow statistics { receiver [<receiver_index_list>] | samplers [interface [<samplers_list>] (<port_type> [<v_port_type_list>])] }

Parameter

interface	Interface
receiver	Clear statistics for receiver.
<port_type>	GigabitEthernet
<Samplers : option>	runtime
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# clear sflow statistics interface
GigabitEthernet 1/1-18
```

spanning-tree

Spanning Tree Protocol Bridge.

Syntax

clear spanning-tree { { statistics [interface (<port_type> [<v_port_type_list>])] } | { detected-protocols [interface (<port_type> [<v_port_type_list_1>])] } }

Parameter

detected-protocols	Set the STP migration check
statistics	STP statistics
interface	Choose port
<port_type>	GigabitEthernet
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# clear spanning-tree detected-protocols interface GigabitEthernet 1/1-18
```

statistics

Clear statistics for a given interface

Syntax

clear statistics interface <port_type> <port_type_list>

clear statistics <port_type> <port_type_list>

Parameter

<port_type>	GigabitEthernet
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# clear statistics GigabitEthernet 1/1-18
SM16TAT2DPA#
```

3 CONFIGURE Commands

Table : CONFIGURE Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a login banner
bonjour	Set bonjour's configurations
clock	Configure time-of-day clock
default	Set a command to its defaults
dms	Enable DMS Master
do	To run exec commands in config mode
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
end	Go back to EXEC mode
event	Trap event severity level
exit	Exit from Configuration mode
green-ethernet	Green ethernet (Power reduction)
gvrp	Enable GVRP feature
help	Description of the interactive help system
hostname	Set system's network name
interface	Select an interface to configure
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP settings
line	Configure a terminal line
lldp	LLDP configurations.

logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
monitor	Set monitor configuration.
mvr	Multicast VLAN Registration configuration
no	Negate a command or set its defaults
ntp	Configure NTP
poe	power over ethernet
port-security	Enable/disable port security globally.
privilege	Command privilege parameters
qos	Quality of Service
radius-server	Configure RADIUS
rmon	Remote Monitoring
sflow	Statistics flow.
smtp	Set email information
snmp-server	Set SNMP server's configurations
spanning-tree	Spanning Tree protocol
system	Set the SNMP server's configurations
tacacs-server	Configure TACACS+
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	VLAN commands
voice	Voice appliance attributes
web	Web

terminal

Configure from the terminal.

Syntax

configure terminal

EXAMPLE

```
SM16TAT2DPA# configure terminal
SM16TAT2DPA(config)#
```

aaa

Authentication, Authorization and Accounting.

SYNTAX

aaa authentication login { console | telnet | ssh | http } { { local | radius | tacacs } [{ local | radius | tacacs } [{ local | radius | tacacs }]] }

Parameter

authentication	Authentication
login	Login
console	Configure Console
http	Configure HTTP
ssh	Configure SSH
telnet	Configure Telnet
local	Use local database for authentication
radius	Use RADIUS for authentication
tacacs	Use TACACS+ for authentication

EXAMPLE

```
SM16TAT2DPA(config)# aaa authentication login http radius
SM16TAT2DPA(config)#
```

access

Access management.

SYNTAX

access management

access management <access_id> <access_vid> <start_addr> [to <end_addr>] { [web] [snmp] [telnet] | all }

Parameter

management	Access management configuration
< 1-16>	ID of access management entry
< 1-4094>	The VLAN ID for the access management entry
< ipv4_addr>	Start IPv4 address
< ipv6_addr>	Start IPv6 address
all	All services
snmp	SNMP service
telnet	TELNET/SSH service
to	End address of the range
web	Web service

EXAMPLE

```
SM16TAT2DPA(config)# access management 10 3 192.168.1.1 all
SM16TAT2DPA(config)#
```

aggregation

Aggregation mode.

SYNTAX

aggregation mode { [dmac] [ip] [dmac] [port] }

Parameter

mode	Traffic distribution mode
dmac	Destination MAC affects the distribution
ip	IP address affects the distribution
port	IP port affects the distribution
smac	Source MAC affects the distribution

EXAMPLE

```
SM16TAT2DPA(config)# aggregation mode ip port dmac smac
SM16TAT2DPA(config)#
```

banner

Define a login banner

SYNTAX

banner [motd] <banner>

banner exec <banner>

banner login <banner>

Parameter

<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

EXAMPLE

```
SM16TAT2DPA(config)# banner exec LINE
Enter TEXT message.  End with the character 'L'.
L
SM16TAT2DPA(config)#
```

bonjour

Set bonjour's configurations. Enable, disable, and show the Bonjour discovery feature.The default is Disabled. This feature was designed for discovering IP cameras, an ideal feature for the surveillance applications.

Bonjour is Apple's implementation of zeroconf. Bonjour locates devices such as printers on a local network using multicast mDNS service records. Multicast DNS is a way of using familiar DNS programming interfaces, packet formats and operating semantics, in a small network where no conventional DNS server has been installed. For more information see IETF RFC 6762.

SYNTAX

bonjour <cr>

Parameter

bonjour <cr>

bonjour |

EXAMPLE

```
SM16TAT2DPA(config)# do show bonjour
bonjour Mode                : Disabled
SM16TAT2DPA(config)# bonjour ?
   <cr>
SM16TAT2DPA(config)# bonjour
SM16TAT2DPA(config)# do show bonjour
bonjour Mode                : Enabled
SM16TAT2DPA(config)#
```

clock

Configure time-of-day clock.

SYNTAX

clock set <icliDate> <icliTime>

clock summer-time <word16> date [<start_month_var> <start_date_var> <start_year_var> <start_hour_var> <end_month_var> <end_date_var> <end_year_var> <end_hour_var> [<offset_var>]]

clock summer-time <word16> recurring [<start_week_var> <start_day_var> <start_month_var> <start_hour_var> <end_week_var> <end_day_var> <end_month_var> <end_hour_var> [<offset_var>]]

clock timezone <word_var> <hour_var> [<minute_var>]

Parameter

set	set clock
summer-time	Configure summer (daylight savings) time
timezone	Configure time zone
<date>	yyyy/mm/dd
<time>	hh:mm:ss
<2000-2097>	Year to start
hh:mm	Time to start (hh:mm)
<1-12>	Month to end
<1-31>	Date to end
<2000-2097>	Year to end
hh:mm	Time to end (hh:mm)
<1-1440>	Offset to add in minutes
<1-5>	Week number to start
<1-7>	Weekday to start
<1-12>	Month to start

EXAMPLE

```
SM16TAT2DPA(config)# clock set 2014/11/04 10:22:03
2014-11-04T10:22:03+00:00
SM16TAT2DPA(config)# do show clock
System Time    : 2011-01-01T00:05:48+00:00
```

debug

Configure Debugging functions.

SYNTAX

enable password

parsing

vcl policy VCL commands

Parameter

debug set debug functions.

EXAMPLE

```
SM16TAT2DPA(config)# debug enable password
priv = 0 -> clear,
priv = 1 -> clear,
priv = 2 -> clear,
priv = 3 -> clear,
priv = 4 -> clear,
priv = 5 -> clear,
priv = 6 -> clear,
priv = 7 -> clear,
priv = 8 -> clear,
priv = 9 -> clear,
priv = 10 -> clear,
priv = 11 -> clear,
priv = 12 -> clear,
priv = 13 -> clear,
priv = 14 -> clear,
priv = 15 -> clear,
priv = 16 -> clear,
SM16TAT2DPA(config)#

SM16TAT2DPA(config)# debug parsing ?
   <cr>
SM16TAT2DPA(config)# debug parsing
interface ten 1/1
         ^
% Invalid word detected at '^' marker.

SM16TAT2DPA(config)#

SM16TAT2DPA(config)# debug vcl ?
   policy    Policy configuration
SM16TAT2DPA(config)# debug vcl policy ?
   <Policy : 0-255>    Policy number to apply
SM16TAT2DPA(config)# debug vcl policy 1 ?
   <cr>
SM16TAT2DPA(config)# debug vcl policy 1
SM16TAT2DPA(config)#
```

default

Set a command to its defaults

SYNTAX

default access-list rate-limiter [<rate_limiter_list>]

Parameter

access-list	Access list
rate-limiter	Rate limiter
<RateLimiterId : 1-16>	Rate limiter ID

EXAMPLE

```
SM16TAT2DPA(config)# default access-list rate-limiter 3
SM16TAT2DPA(config)#
```

dms

Enable DMS Master. The Transition Networks DMS (Device Management System) is an intelligent management tool embedded in the switch to intuitively help IT/TS in reducing support time, cost, and effort.

SYNTAX

scan-mode DMS Scan Mode

scan-range DMS Scan Range

<cr> Enable DMS mode.

Parameter

dms <cr>

dms scan-mode { automatic | manual } :

dms scan-range <index> <start_addr_name> <end_addr_name> : Enter a range of IP addresses for each of up to four DMS Device Scan Ranges. Valid only when Device Scan Range parameter is set to manual. Note that the DMS scan-range includes IP entries that duplicate those of the system.

EXAMPLE

```
SM16TAT2DPA(config)# dms ?
    scan-mode     Scan Mode
    scan-range    Scan Range
    <cr>
SM16TAT2DPA(config)# dms?
    dms     Enable DMS Master
    <cr>
SM16TAT2DPA(config)# dms??
dms
dms scan-mode { automatic | manual }
dms scan-range <index> <start_addr_name> <end_addr_name>
SM16TAT2DPA(config)# dms scan-mode ?
    automatic    Scan Mode in Automatic
    manual       Scan Mode in Manual
SM16TAT2DPA(config)# dms scan-mode manual
SM16TAT2DPA(config)# dms scan-range 1 192.168.1.30 192.168.1.77
SM16TAT2DPA(config)#
```

do

To run exec commands in config mode.

SYNTAX

do < LINE >{[< LINE >]}

Parameter

<LINE> Exec Command

EXAMPLE

```
SM16TAT2DPA(config)# do show vlan
VLAN  Name                          Ports
--------------------------------------------------------------------------------
--------------------
1    default                        GigabitEthernet 1/1, GigabitEthernet 1/2,
GigabitEthernet 1/3,
                                   GigabitEthernet 1/4, GigabitEthernet 1/5
SM16TAT2DPA(config)#
```

dot1x

IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x authentication timer inactivity <v_10_to_100000>

dot1x authentication timer re-authenticate <v_1_to_3600>

dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }*1

dot1x guest-vlan <value>

dot1x guest-vlan supplicant

dot1x max-reauth-req <value>

dot1x re-authentication

dot1x system-auth-control

dot1x timeout quiet-period <v_10_to_1000000>

dot1x timeout tx-period <v_1_to_65535>

Parameter

authentication	Authentication
feature	Globally enables/disables a dot1x feature functionality
guest-vlan	Guest VLAN
max-reauth-req	Guest VLAN ID used when entering the Guest VLAN.
re-authentication	Set Re-authentication state
system-auth-control	Set the global NAS state
timeout	timeout
timer	timer
inactivity	Time in seconds between check for activity on successfully authenticated MAC addresses.
re-authenticate	The period between re-authentication attempts in seconds
<10-1000000>	seconds
<1-3600>	seconds
guest-vlan	Globally enables/disables state of guest-vlan
radius-qos	Globally enables/disables state of RADIUS-assigned QoS.
radius-vlan	Globally enables/disables state of RADIUS-assigned VLAN.
<1-4095>	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN.
supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest VLAN, it will first

	check if this option is enabled or disabled. If disabled (unchecked; default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port for the life-time of the port. If enabled (checked), the switch will consider entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.
<1-255>	number of times
quiet-period	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.
tx-period	the time between EAPOL retransmissions.
<10-1000000>	seconds
<1-65535>	seconds

EXAMPLE

```
SM16TAT2DPA(config)# dot1x authentication timer inactivity 1000
SM16TAT2DPA(config)# dot1x feature guest-vlan radius-qos radius-vlan
SM16TAT2DPA(config)# dot1x guest-vlan 33
SM16TAT2DPA(config)# dot1x max-reauth-req 3
SM16TAT2DPA(config)# dot1x re-authentication
SM16TAT2DPA(config)# dot1x system-auth-control
SM16TAT2DPA(config)# dot1x timeout quiet-period 3000
```

enable

Modify enable password parameters.

SYNTAX

enable password [<level> <1-15>] <WORD>

enable secret { 0 | 5 } [< level> <1-15>] <WORD>

Parameter

password	Assign the privileged level clear password
secret	Assign the privileged level secret
WORD	The UNENCRYPTED (cleartext) password
level	Set exec level password
<1-15>	Level number
0	Specifies an UNENCRYPTED password will follow
5	Specifies an ENCRYPTED secret will follow

EXAMPLE

```
SM16TAT2DPA(config)# enable password level 10 999
SM16TAT2DPA(config)#
```

event

Trap event severity level.

SYNTAX

event group <group_name> { level <lvl> | syslog { enable | disable } | trap { enable | disable } | smtp { enable | disable } | ipush { enable | disable } }

Parameter

Group	Configure trap event severity level
<word32>	ACL, ACL_Log, Access_Mgmt, Auth_Failed, Cold_Start, Config_Info, FAN_FAIL, Firmware_Upgrade, Import_Export, LACP, Link_Status, Login, Logout, Loop_Protect, Mgmt_IP_Change, Module_Change, NAS, Password_Change, Poe_Auto_Check, Port_Security, Temperature, VLAN, Voltage, Warm_Start

EXAMPLE

```
SM16TAT2DPA(config)# event group VLAN trap enable
SM16TAT2DPA(config)#
```

Factory

Set board configuration.

SYNTAX

Factory <xxxxxxx>

Parameter

bios	fac-MAC	fan-turn
hw-part-num	hw-ver	login-page
manufacture-name	manufacture-url	mech-ver
model-name	model-number	platform-name
poe-power	poe-power-threshold-high	poe-power-threshold-low
serialno	snmp-enterprise-id	snmp-prod-id
snmp-sw-id	sys-desc	tlv
vendor-name	watchdog	

EXAMPLE

```
SM16TAT2DPA(config)# Factory ?
    bios                      Configure device's BIOS Version
    fac-MAC                   Configure device's MAC Address
    fan-turn                  Configure Fan Number(location)
    hw-part-num               Configure Hardware Part Number
    hw-ver                    Configure Hardware Revision
    login-page                Configure Login Page Other Description
    manufacture-name           Configure Manufacture Name
    manufacture-url            Configure Manufacture URL
    mech-ver                  Configure devices's Mechanical Reversion
    model-name                Configure Model Name
    model-number              Configure Model Number
    platform-name             Configure Platform Name
    poe-power                 Configure the value of the primary power supply
    poe-power-threshold-high   Configure the high threshold value of the PoE
                             consumption power
    poe-power-threshold-low    Configure the low threshold value of the PoE
                             consumption power
    serialno                  Configure device's Serial Number
    snmp-enterprise-id         Configure SNMP Enterprise ID
    snmp-prod-id              Configure SNMP Product ID
    snmp-sw-id                Configure SNMP L2 Switch ID
    sys-desc                  Configure System Description
    tlv                       Show board information
    vendor-name               Configure Vendor Name
    watchdog                  Configure the watchdog mode
SM16TAT2DPA(config)# Factory
```

Green-ethernet

Powering down of PHYs when there is no traffic.

SYNTAX

green-ethernet <xxx>

Parameter

optimize-for-power	Set if EEE will be optimized for least power comsumption (else optimized for least traffic latency).

EXAMPLE

```
SM16TAT2DPA(config)# green-ethernet eee?
    eee    Powering down of PHYs when there is no traffic.
SM16TAT2DPA(config)# green-ethernet eee ?
    optimize-for-power    Set if EEE will be optimized for least power
                        comsumption (else optimized for least traffic
                        latency).
SM16TAT2DPA(config)# green-ethernet eee optimize-for-power ?
    <cr>
SM16TAT2DPA(config)# green-ethernet eee optimize-for-power
SM16TAT2DPA(config)#
```

gvrp

Enable GVRP feature

SYNTAX

gvrp

gvrp max-vlans <1-4095>

gvrp time { [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>] }*1

Parameter

time config gvrp timer value in units of centi seconds [cs]

EXAMPLE

```
SM16TAT2DPA(config)# gvrp max-vlans 333
SM16TAT2DPA(config)# gvrp time join-time 13 leave-all-time 3000 leave-time 200
SM16TAT2DPA(config)#
```

hostname

Set system's network name.

SYNTAX

hostname < WORD >

Parameter

WORD This system's network name.

EXAMPLE

```
SM16TAT2DPA(config)# hostname abc
abc(config)#
```

interface

Select an interface to configure.

SYNTAX

interface (<port_type> [<plist>])

interface vlan <vlist>

Parameter

<port_type>	GigabitEthernet
vlan	VLAN interface configurations
<vlan_list>	List of VLAN interface numbers, 1-4095
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA(config)# interface GigabitEthernet 1/1-18
SM16TAT2DPA(config-if)# poe weekday Fri hour 22
SM16TAT2DPA(config-if)# GEPOEL2PESW18G(config)# interface vlan 3
SM16TAT2DPA(config-if-vlan)# ip address dhcp
SM16TAT2DPA(config-if-vlan)#
```

ip

Internet Protocol.

SYNTAX

ip arp inspection

ip arp inspection entry interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>

ip arp inspection translate [interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>]

ip arp inspection vlan <in_vlan_list>

ip arp inspection vlan <in_vlan_list> logging { deny | permit | all }

ip dhcp excluded-address <low_ip> [<high_ip>]

ip dhcp pool <pool_name>

ip dhcp relay

ip dhcp relay information option

ip dhcp relay information policy { drop | keep | replace }

ip dhcp server

ip dhcp snooping

ip dns proxy

ip helper-address <v_ipv4_ucast>

ip http secure-redirect

ip http secure-server

ip igmp host-proxy [leave-proxy]

ip igmp snooping

ip igmp snooping vlan <v_vlan_list>

ip igmp ssm-range <v_ipv4_mcast> <ipv4_prefix_length>

ip igmp unknown-flooding

ip name-server { <v_ipv4_addr> | dhcp [interface vlan <v_vlan_id>] }

ip route <v_ipv4_addr> <v_ipv4_netmask> <v_ipv4_gw>

ip routing

ip source binding interface <port_type> <in_port_type_id> <vlan_var> <ipv4_var> <mac_var>

ip ssh

ip verify source

ip verify source translate

Parameter

arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
dns	Domain Name System

helper-address	DHCP relay server
http	Hypertext Transfer Protocol
igmp	Internet Group Management Protocol
name-server	Domain Name System
route	Add IP route
routing	Enable routing for IPv4 and IPv6
source	source command
ssh	Secure Shell
verify	verify command
inspection	ARP inspection
entry	arp inspection entry
interface	arp inspection entry interface config
<port_type>	Port type in Fast, Giga ethernet
<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
deny	log denied entries
permit	log permitted entries
all	log all entries
translate	arp inspection translate all entries
vlan	arp inspection vlan setting
<vlan_list>	arp inspection vlan list
relay	**DHCP relay agent information**
information	DHCP information option <Option 82>
option	DHCP option
information	DHCP information option(Option 82)
policy	Policy for handling the receiving DHCP packet already include the information option
drop	Drop the package when receive a DHCP message that already contains relay information
keep	Keep the original relay information when receive a DHCP message that already contains it
replace	Replace the original relay information when receive a DHCP message that already contains it
server	Enable DHCP server
snooping	DHCP snooping
proxy	DNS proxy service
secure-redirect	Secure HTTP web rediction
secure-server	Secure HTTP web server

snooping	Snooping IGMP
<word16>	Profile name in 16 char's
vlan	IGMP VLAN
ssm-range	IPv4 address range of Source Specific Multicast
<ipv4_mcast>	Valid IPv4 multicast address
<4-32>	Prefix length ranges from 4 to 32
unknown-flooding	Flooding unregistered IPv4 multicast traffic
<ipv4_ucast>	A valid IPv4 unicast address
dhcp	Dynamic Host Configuration Protocol
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID
<ipv4_addr>	Network
<ipv4_netmask>	Netmask
<ipv4_addr>	Gateway
binding	ip source binding
interface	ip source binding entry interface config
<port_type>	* or Gigibitethernet
*****	All switches or All ports
Gigabitethernet	1 Gigabitethernet Port
<port_type_id>	Port ID in the format of switch-no/port-no, ex 1/1-18 for Gigabitethernet
<vlan_id>	Select a VLAN id to configure
<ipv4_ucast>	Select an IP Address to configure
<ipv4_netmask>	Select a subnet mask to configure
<mac_ucast>	Select a MAC address to configure
source	verify source
limit	limit command
<0-2>	the number of limit
translate	ip verify source translate all entries
loggin	ARP inspection vlan loging mode config

EXAMPLE

```
SM16TAT2DPA(config)# ip arp inspection
SM16TAT2DPA(config)# ip dhcp relay
SM16TAT2DPA(config)# ip dns proxy
SM16TAT2DPA(config)# ip helper-address 192.168.1.1
SM16TAT2DPA(config)# ip http secure-server
```

```
SM16TAT2DPA(config)# ip igmp snooping vlan 3
SM16TAT2DPA(config)# ip name-server 192.168.1.6
SM16TAT2DPA(config)# ip route 192.168.1.1 255.255.255.0 192.168.1.100
SM16TAT2DPA(config)# ip routing
SM16TAT2DPA(config)# ip ssh
SM16TAT2DPA(config)# ip verify source translate
IP Source Guard:
       Translate 0 dynamic entries into static entries.
```

ipmc

IPv4/IPv6 multicast configuration.

SYNTAX

ipmc profile

ipmc profile <profile_name>

ipmc range <entry_name> { <v_ipv4_mcast> [<v_ipv4_mcast_1>] | <v_ipv6_mcast> [<v_ipv6_mcast_1>] }

Parameter

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
< word16>	Range entry name in 16 characters
<ipv4_mcast>	Valid IPv4 multicast address
<ipv6_mcast>	Valid IPv6 multicast address

EXAMPLE

```
SM16TAT2DPA(config)# ipmc profile test
SM16TAT2DPA(config-ipmc-profile)#
```

ipv6

IPv6 configuration commands

SYNTAX

ipv6 mld host-proxy [leave-proxy]

ipv6 mld snooping

ipv6 mld snooping vlan <v_vlan_list>

ipv6 mld ssm-range <v_ipv6_mcast> <ipv6_prefix_length>

ipv6 mld unknown-flooding

ipv6 route <v_ipv6_subnet> { <v_ipv6_ucast> | interface vlan <v_vlan_id> <v_ipv6_addr> }

Parameter

mld	Multicasat Listener Discovery
route	Configure static routes
host-proxy	MLD proxy configuration
snooping	Snooping MLD
ssm-range	IPv6 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv6 multicast traffic
leave-proxy	MLD proxy for leave configuration
vlan	MLD VLAN
<vlan_list>	VLAN identifier(s): VID
<ipv6_mcast>	Valid IPv6 multicast address
X:X:X:X::X/<0-128>	IPv6 prefix x:x::y/z

EXAMPLE

```
SM16TAT2DPA(config)# ipv6 mld host-proxy leave-proxy
SM16TAT2DPA(config)# ipv6 mld snooping vlan 1
SM16TAT2DPA(config)#
```

lacp

LACP settings.

SYNTAX

lacp system-priority <1-65535>

Parameter

system-priority	System priority
<1-65535>	Priority value, lower means higher priority

EXAMPLE

```
SM16TAT2DPA(config)# lacp system-priority 333
SM16TAT2DPA(config)#
```

line

Configure a terminal line.

SYNTAX

line { <0~16> | console 0 | vty <0~15> }

Parameter

<0~16>	List of line numbers
console	Console terminal line
0	Console Line number
vty	Virtual terminal
<0~15>	List of vty numbers

EXAMPLE

```
SM16TAT2DPA(config)# line  console 0
SM16TAT2DPA(config-line)#
```

lldp

LACP configurations.

SYNTAX

lldp holdtime <2-10>

lldp med datum { wgs84 | nad83_navd88 | nad83_mllw }

lldp med fast <1-10>

lldp med location-tlv altitude { meters | floors } <word11>

lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code } <string250>

lldp med location-tlv elin-addr <dword25>

lldp med location-tlv latitude { north | south } <word8>

lldp med location-tlv longitude { west | east } <word9>

lldp med media-vlan policy-list <range_list>

lldp med media-vlan-policy <0-31> { voice | voice-signaling | guest-voice-signaling | guest-voice | softphone-voice | video-conferencing | streaming-video | video-signaling } { tagged <vlan_id> | untagged } [l2-priority <0-7>] [dscp <0-63>]

lldp reinit <1-10>

lldp timer <5-32768>

lldp transmission-delay <1-8192>

Parameter

holdtime	Sets LLDP hold time (The neighbor switch willdiscard the LLDP information after "hold time" multiplied with "timer" seconds).
med	Media Endpoint Discovery.
reinit	LLDP tx reinitialization delay in seconds.
timer	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).
transmission-delay	Sets LLDP transmision-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)
<2-10>	2-10 seconds.
<1-10>	1-10 seconds.
<5-32768>	5-32768 seconds.
<1-8192>	1-8192 seconds.

datum	Datum (geodetic system) type.
fast	Number of times to repeat LLDP frame transmission at fast start.
location-tlv	LLDP-MED Location Type Length Value parameter.
media-vlan-policy	Use the media-vlan-policy to create a policy, which can be assigned to an interface.
nad83_mllw	Mean lower low water datum 1983
nad83_navd88	North American vertical datum 1983
wgs84	World Geodetic System 1984
altitude	**Altitude parameter**
meter	**Altitude value**
floors	**Altitude value**
civic-addr	Civic address information and postal information
country	The two-letter ISO 3166 country code in capital ASCII letters – e.g.,: DK, DE or US.
state	National subdivisions (state, canton, region, province, prefecture).
county	County, parish, gun (Japan), district.
city	City, township, shi (Japan) - Example: Copenhagen.
district	City division, borough, city district, ward, chou (Japan).
block	Neighbourhood, block.
street	Street - Example: Poppelvej.
leading-street-direction	Leading street direction - Example: N.
trailing-street-suffix	Trailing street suffix - Example: SW.
street-suffix	Street suffix - Example: Ave, Platz.
house-no	House number - Example: 21.
house-no-suffix	House number suffix - Example: A, 1/2.
landmark	Landmark or vanity address - Example: Columbia University.
additional-info	Additional location info - Example: South Wing.
name	Name (residence and office occupant) - Example: Flemming Jahn.
zip-code	Postal/zip code - Example: 2791.
building	Building (structure) - Example: Low Library.
apartment	Unit (Apartment, suite) - Example: Apt 42.
floor	Floor - Example: 4th floor.
room-number	Room number - Example: 450F.
place-type	Place type - Example: Office.
postal-community-name	Postal community name - Example: Leonia.
p-o-box	Post office box (P.O. BOX) - Example: 12345.
additional-code	Additional code - Example: 1320300003.
<string250>	Value for the corresponding selected civic address.

elin-addr	Emergency Location ID Number, (e.g. E911 and others), as defined by TIA or NENA.
<dword25>	ELIN value
north	Setting latitude direction to north.
south	Setting latitude direction to south.
<word8>	Latitude degrees (0.0000-90.0000).
policy-list	Assignment of policies.
<range_list>	Policies to assign to the interface.
<0-31>	Policy id for the policy which is created.
voice	Create a voice policy.
voice-signaling	Create a voice signaling policy.
guest-voice-signaling	Create a guest voice signaling policy.
guest-voice	Create a guest voice policy.
softphone-voice	Create a softphone voice policy.
video-conferencing	Create a video conferencing policy.
streaming-video	Create a streaming video policy.
video-signaling	Create a video signaling policy.
tagged	The policy uses tagged frames.
<vlan_id>	The VLAN the policy uses tagged frames.
untagged	The policy uses un-tagged frames.
l2-priority	Layer 2 priority.
<0-7>	Priority 0-7
dscp	Differentiated Services Code Point.
<0-63>	DSCP value 0-63.

EXAMPLE

```
SM16TAT2DPA(config)# lldp holdtime 5
SM16TAT2DPA(config)# lldp med fast 5
SM16TAT2DPA(config)# lldp reinit 3
SM16TAT2DPA(config)# lldp timer 555
SM16TAT2DPA(config)# lldp transmission-delay 333
Note: According to IEEE 802.1AB-clause 10.5.4.2 the transmission-delay must not
be larger than LLDP timer * 0.25. LLDP timer changed to 13332
```

logging

Syslog (system logging) configuration.

SYNTAX

logging host { <ipv4_ucast> | <hostname> }

logging level { info | warning | error }

logging on

Parameter

host	host
<ipv4_ucast>	IP address of the log server
<hostname>	Donain name of the log server
level	level
info	Information
warning	Warning
error	Error
on	Enable syslog server

EXAMPLE

```
SM16TAT2DPA(config)# logging level error
SM16TAT2DPA(config)# logging on
SM16TAT2DPA(config)#
```

loop-protect

Loop protection configuration.

SYNTAX

loop-protect

loop-protect shutdown-time <0-604800>

loop-protect transmit-time <1-10>

Parameter

shutdown-time	Loop protection shutdown time interval
<0-604800>	Shutdown time in second
transmit-time	Loop protection transmit time interval
<1-10>	Transmit time in second

EXAMPLE

```
SM16TAT2DPA(config)# loop-protect
SM16TAT2DPA(config)# loop-protect shutdown-time 333
SM16TAT2DPA(config)# loop-protect transmit-time 3
SM16TAT2DPA(config)#
```

mac

MAC table entries/configuration.

SYNTAX

mac address-table aging-time <0,10-1000000>

mac address-table static <mac_addr> vlan <vlan_id> interface <port_type> <port_type_list>

Parameter

address-table	Mac Address Table
aging-time	Mac address aging time
<0,10-1000000>	Aging time in seconds, 0 disables aging
static	Static MAC address
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN keyword
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
<port_type>	Port type * or Gigabitethernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA(config)# mac address-table aging-time 3333
SM16TAT2DPA(config)#
```

monitor

Set monitor configuration.

SYNTAX

monitor destination interface <port_type> <port_type_id>

monitor source { interface <port_type> <port_type_list> | cpu } { both | rx | tx }

Parameter

destination	The destination port. That is the port that trafficed should be mirrored to.
interface	Interface to mirror traffic to.
source	The source port. That is the source port to be mirrored to the destination port.
interface	Mirrot interface traffic.
<port_type>	1 Gigabit Ethernet port
*****	**All switches or all ports.**
<port_type_list>	Port list in 1/1-18.
cpu	Mirrot CPU traffic.
both	Setting source port to both will mirror both ingress and egress traffic.
rx	Setting source port to rx will mirror bothingress traffic.
tx	Setting source port to tx will mirror both egress traffic.
<port_type>	Port type in Gigabitethernet
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA(config)# monitor destination interface GigabitEthernet 1/12
SM16TAT2DPA(config)# monitor source  cpu both
SM16TAT2DPA(config)#
```

mvr

Multicast VLAN Registration configuration.

SYNTAX

mvr

mvr name <mvr_name> channel <profile_name>

mvr name <mvr_name> frame priority <cos_priority>

mvr name <mvr_name> frame tagged

mvr name <mvr_name> igmp-address <v_ipv4_ucast>

mvr name <mvr_name> last-member-query-interval <ipmc_lmqi>

mvr name <mvr_name> mode { dynamic | compatible }

mvr vlan <v_vlan_list> [name <mvr_name>]

mvr vlan <v_vlan_list> channel <profile_name>

mvr vlan <v_vlan_list> frame priority <cos_priority>

mvr vlan <v_vlan_list> frame tagged

mvr vlan <v_vlan_list> igmp-address <v_ipv4_ucast>

mvr vlan <v_vlan_list> last-member-query-interval <ipmc_lmqi>

mvr vlan <v_vlan_list> mode { dynamic | compatible }

Parameter

name	MVR multicast name
<word16>	MVR multicast VLAN name
channel	MVR channel configuration
<word16>	Profile name in 16 char's
frame	MVR control frame in TX
priority	Interface CoS priority
<0-7>	CoS priority ranges from 0 to 7
tagged	Tagged IGMP/MLD frames will be sent
igmp-address	MVR address configuration used in IGMP
<ipv4_ucast>	A valid IPv4 unicast address MVR multicast VLAN name
last-member-query-interval	Last Member Query Interval in tenths of seconds
<0-31744>	0 - 31744 tenths of seconds
mode	MVR mode of operation
dynamic	Dynamic MVR operation mode
compatible	Compatible MVR operation mode
vlan	MVR multicast vlan
<vlan_list>	MVR multicast VLAN list

channel	MVR channel configuration
<word16>	Profile name in 16 char's
frame	MVR control frame in TX
priority	Interface CoS priority
<0-7>	CoS priority ranges from 0 to 7
igmp-address	MVR address configuration used in IGMP
<ipv4_ucast>	A valid IPv4 unicast address
<vlan_list>	MVR multicast VLAN list
last-member-query-interval	Last Member Query Interval in tenths of seconds
<0-31744>	0 - 31744 tenths of seconds
compatible	Compatible MVR operation mode

EXAMPLE

```
SM16TAT2DPA(config)# mvr vlan 10 mode dynamic
SM16TAT2DPA(config)#
```

ntp

Configure NTP.

SYNTAX

ntp

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

ntp server <1-5> ip-address <ipv4_ucast>

ntp server <1-5> ip-address <ipv6_ucast>

Parameter

server	Configure NTP server
<1-5>	index number
ip-address	ip address
<ipv4_ucast>	ipv4 address
<ipv6_ucast>	ipv6 address
<hostname>	domain name

EXAMPLE

```
SM16TAT2DPA(config)# ntp server 3 ip-address 192.168.1.1
SM16TAT2DPA(config)#
```

poe

Configure Power Over Ethernet (PoE).

SYNTAX

poe management mode { class-consumption | class-reserved-power | allocation-consumption | allocation-reserved-power | lldp-consumption | lldp-reserved-power }

poe ping-check { enable | disable }

Parameter

management	Use management mode to configure PoE power management method.
Ping-check	Enable/Disable POE Ping Check.
Mode	PoE Power Management Mode
allocation-consumption	Max. port power determined by allocated, and power is managed according to power consumption.
allocation-reserved-power	Max. port power determined by alocated, and power is managed according to reserved power.
class-consumption	Max. port power determined by class, and power is managed according to power consumption.
class-reserved-power	Max. port power determined by class, and power is managed according to reserved power.
lldp-consumption	Max. port power determined by LLDP Media protocol, and power is managed according to power consumption.
lldp-reserved-power	Max. port power determined by LLDP Media protocol, and power is managed according to reserved power.

EXAMPLE

```
SM16TAT2DPA(config)# poe management mode allocation-consumption
SM16TAT2DPA(config)# poe management mode allocation-reserved-power
SM16TAT2DPA(config)# poe management mode class-consumption
SM16TAT2DPA(config)# poe management mode class-reserved-power
SM16TAT2DPA(config)# poe management mode lldp-consumption
SM16TAT2DPA(config)# poe management mode lldp-reserved-power
SM16TAT2DPA(config)# Poe ping-check enable
SM16TAT2DPA(config)#
```

port-security

Enable/disable port security globally.

SYNTAX

port-security

port-security aging

port-security aging time <v_10_to_10000000>

Parameter

aging	Time in seconds between check for activity on learned MAC addresses.
time	Time in seconds between check for activity on learned MAC addresses.
<10-10000000>	seconds

EXAMPLE

```
SM16TAT2DPA(config)# port-security agin time 1000
SM16TAT2DPA(config)#
```

privilege

Command privilege parameters.

SYNTAX

privilege { exec | configure | config-vlan | line | interface | if-vlan | ipmc-profile | snmps-host | stp-aggr | dhcp-pool | rfc2544-profile } level <privilege> <cmd>

Parameter

config-vlan	VLAN Configuration Mode
configure	Global configuration mode
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
level	Set privilege level of command
<LINE>	Initial valid words and literals of the command to modify, in 128 characters

EXAMPLE

```
SM16TAT2DPA(config)# privilege config-vlan level 10 LINE
SM16TAT2DPA(config)# privilege configure level 10 LINE
SM16TAT2DPA(config)# privilege dhcp-pool level 10 LINE
SM16TAT2DPA(config)#
```

radius-server

Configure RADIUS.

SYNTAX

radius-server attribute 32 <line1-255>

radius-server attribute 4 <ipv4_ucast>

radius-server attribute 95 <ipv6_ucast>

radius-server deadtime <1-1440>

radius-server host { <word1-255> | <ipv4_ucast> | <ipv6_ucast> } [auth-port <0-65535>] [acct-port <0-65535>] [timeout <1-1000>] [retransmit <1-1000>] [key <line1-63>]

radius-server key <line1-63>

radius-server retransmit <1-1000>

radius-server timeout <1-1000>

Parameter

deadtime	Time to stop using a RADIUS server that doesn't respond
host	Specify a RADIUS server
key	Set RADIUS encryption key
retransmit	Specify the number of retries to active server
timeout	Time to wait for a RADIUS server to reply
<Minutes : 1-1440>	Time in minutes
<Host4 : ipv4_ucast>	IPv4 address
<Host6 : ipv6_ucast>	IPv6 address
<HostName : word1-255>	Hostname
acct-port	UDP port for RADIUS accounting server
auth-port	UDP port for RADIUS authentication server
key	Server specific key (overrides default)
retransmit	Specify the number of retries to active server (overrides default)
timeout	Time to wait for this RADIUS server to reply (overrides default)
<AuthPort : 0-65535>	UDP port number
<Seconds : 1-1000>	Wait time in seconds
<Key : line1-63>	The shared key
<1-1000>	Number of retries for a transaction

EXAMPLE

```
SM16TAT2DPA(config)# radius-server host device key 12
SM16TAT2DPA(config)#
```

rmon

Remote Monitoring.

SYNTAX

rmon alarm <1-65535> <WORD> <1-2147483647> { absolute | delta } rising-threshold <-2147483648-2147483647> [<0-65535>] falling-threshold <-2147483648-2147483647> [<0-65535>] { [rising | falling | both] }

rmon alarm <1-65535> { ifInOctets | ifInUcastPkts | ifInNUcastPkts | ifInDiscards | ifInErrors | ifInUnknownProtos | ifOutOctets | ifOutUcastPkts | ifOutNUcastPkts | ifOutDiscards | ifOutErrors } <uint> <1-2147483647> { absolute | delta } rising-threshold <-2147483648-2147483647> [<0-65535>] falling-threshold <-2147483648-2147483647> [<0-65535>] { [rising | falling | both] }

rmon event <1-65535> [log] [trap <word127>] { [description <line127>] }

Parameter

alarm	Configure an RMON alarm
event	Configure an RMON event
<1-65535>	Alarm entry ID
<WORD>	MIB object to monitor
<1-2147483647>	Sample interval
absolute	Test each sample directly
delta	Test delta between samples
rising-threshold	Configure the rising threshold
<-2147483648-2147483647>	rising threshold value
<0-65535>	Event to fire on rising threshold crossing
falling-threshold	Configure the falling threshold
<-2147483648-2147483647>	falling threshold value
rising	Trigger alarm when the first value is larger than the rising threshold
falling	Trigger alarm when the first value is less than the falling threshold
both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
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
ifInNUcastPkts	The number of broad-cast and multi-cast packets delivered to a higher-layer protocol
ifInDiscards	The number of inbound packets that are discarded even the packets are normal
ifInErrors	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol
ifInUnknownProtos	The number of the inbound packets that were discarded because of the unknown or

	un-support protocol
ifOutOctets	The number of octets transmitted out of the interface , including framing characters
ifOutUcastPkts	The number of uni-cast packets that request to transmit
ifOutNUcastPkts	The number of broad-cast and multi-cast packets that request to transmit
ifOutDiscards	The number of outbound packets that are discarded event the packets is normal
ifOutErrors	The The number of outbound packets that could not be transmitted because of errors
<uint>	ifIndex
<1-2147483647>	Sample interval
absolute	Test each sample directly
delta	Test delta between samples
rising-threshold	Configure the rising threshold

EXAMPLE

```
SM16TAT2DPA(config)# rmon alarm 10000 ifInErrors 10 9999 absolute rising-threshold
0 falling-threshold 0 both
SM16TAT2DPA(config)#
```

sflow

Configure Statistics flow (sFlow).

SYNTAX

sflow agent-ip { ipv4 <ipv4_addr> | ipv6 <ipv6_addr> }

sflow collector-address{ <ipv4_addr> | <ipv6_addr> }

sflow collector-port <1-65535>

sflow max-datagram-size [receiver <range_list>] <200-1468>

sflow timeout [receiver <range_list>] <0-2147483647>

Parameter

agent-ip	The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address.
Ipv4	ipv4 address
Ipv6	ipv6 address
<ipv4_addr>	ipv6 address
<ipv6_addr>	ipv4 address
collector-address	Collector address
collector-port	Collector UDP port
<1-65535>	Port Number
max-datagram-size	Maximum datagram size.
<200-1468>	Bytes
timeout	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.
<0-2147483647>	Number in seconds

EXAMPLE

```
SM16TAT2DPA(config)# sflow agent-ip ipv4 192.168.1.2
SM16TAT2DPA(config)# sflow collector-port 3
SM16TAT2DPA(config)# sflow max-datagram-size 333
SM16TAT2DPA(config)# sflow timeout 3333
SM16TAT2DPA(config)#
```

smtp

Set email information. The function is used to set an Alarm trap when the switch alarm then you could set the SMTP server to send you the alarm mail.

SYNTAX

smtp delete { server | username | sender | returnpath | mailaddress <index> }

smtp mailaddress <index> <mail_addr_name>

smtp returnpath <return_path>

smtp sender <sender_name>

smtp server <hostname>

smtp username <username> <password>

Parameter

delete	Delete command
mailaddress	Configure email address
returnpath	Configure email returnpath
sender	Configure email sender
server	Configure email server
username	Configure email user name

EXAMPLE

```
SM16TAT2DPA(config)# smtp mailaddress 1 BobB
SM16TAT2DPA(config)# smtp returnpath BobRetPath
SM16TAT2DPA(config)# smtp sender Author
SM16TAT2DPA(config)# smtp server Engineering
SM16TAT2DPA(config)# smtp username jeffs@transition.com Belfrey
SM16TAT2DPA(config)#
```

system

Set the SNMP server's configuration.

SYNTAX

system contact <v_line255>

system location <v_line255>

system name <v_line255>

Parameter

contact Set the SNMP server's contact string

location Set the SNMP server's location string

name Set the SNMP server's system model name string

<line255> Maximum number of 255 character strings

EXAMPLE

```
SM16TAT2DPA(config)# system contact 222
SM16TAT2DPA(config)# system location 333
SM16TAT2DPA(config)# system name GE
SM16TAT2DPA(config)#
```

tacacs-server

Configure TACACS+.

SYNTAX

tacacs-server deadtime <minutes>

tacacs-server host <host_name> [port <port>] [timeout <seconds>] [key <key>]

tacacs-server key <key>

tacacs-server timeout <seconds>

Parameter

deadtime	Time to stop using a TACACS+ server that doesn't respond
host	Specify a TACACS+ server
key	Set TACACS+ encryption key
timeout	Time to wait for a TACACS+ server to reply
<Minutes : 1-1440>	Time in minutes (1-1440 minutes).
<Key : line1-63>	The shared key (1-63 characters).
<Seconds : 1-1000>	Wait time in seconds (1-1000 seconds)
<word1-255>	Hostname (1-255 characters)
<ipv4_ucast>	IPv4 address
<ipv6_ucast>	IPv6 address
port	TCP port for TACACS+ server
<0-65535>	TCP port number

EXAMPLE

```
SM16TAT2DPA(config)# tacacs-server deadtime 300
SM16TAT2DPA(config)# tacacs-server host 192.168.1.2
SM16TAT2DPA(config)# tacacs-server key 33
SM16TAT2DPA(config)# tacacs-server timeout 300
SM16TAT2DPA(config)# do show tacacs
Global TACACS+ Server Timeout     : 300 seconds
Global TACACS+ Server Deadtime    : 300 minutes
Global TACACS+ Server Key         : 33
TACACS+ Server #1:
  Host name  : 192.168.1.2
  Port       : 49
  Timeout    :
  Key        :
SM16TAT2DPA(config)#
```

upnp

Set UPnP's configurations. UPnP (Universal Plug and Play) allows devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components.
Caution: UPnP allows clients in the local network to automatically configure the device. UpnP should only be used (enabled) if necessary and with preventive measures as it can result in high security risks for your network.

SYNTAX

upnp

upnp advertising-duration <66-86400>

upnp ttl <1-255>

Parameter

advertising-duration Set the advertising duration. The duration, carried in SSDP packets, is used to inform a control point or control points how often it or they should receive an SSDP advertisement message from this switch. If a control point does not receive any message within the duration, it will think that the switch no longer exists. Due to the unreliable nature of UDP, in the standard it is recommended that such refreshing of advertisements to be done at less than one-half of the advertising duration. In the implementation, the switch sends SSDP messages periodically at the interval one-half of the advertising duration minus 30 seconds. Valid values are 66 - 86400.

ttl Set TTL value. The TTL value is used by UPnP to send SSDP advertisement messages.

<100-86400> advertising duration

<1-255> TTL value

EXAMPLE

```
SM16TAT2DPA(config)# upnp advertising-duration 88
SM16TAT2DPA(config)# upnp ttl 25
SM16TAT2DPA(config)# end
SM16TAT2DPA# show upnp
UPnP Mode               : Disabled
UPnP TTL                : 25
UPnP Advertising Duration : 88
SM16TAT2DPA#
```

username

Establish User Name Authentication.

SYNTAX

username <username> privilege <priv> password encrypted <encry_password>

username <username> privilege <priv> password none

username <username> privilege <priv> password unencrypted <password>

Parameter

<Username : word31>	User name allows letters, numbers and underscores
privilege	Set user privilege level
<privilegeLevel : 0-15>	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
<Password : line31>	The UNENCRYPTED (Plain Text) user password. Any printable characters including space is accepted. Notice that you have no change to get the Plain Text password after this command. The system will always display the ENCRYPTED password.
<Password : word4-44>	The ENCRYPTED (hidden) user password. Notice the ENCRYPTED password will be decoded by system internally. You cannot directly use it as same as the Plain Text and it is not human-readable text normally.

EXAMPLE

```
SM16TAT2DPA(config)# username jefferson privilege 15 password none
SM16TAT2DPA(config)# (config)#
```

vlan

VLAN commands.

SYNTAX

vlan <vlan_list>

vlan ethertype s-custom-port <0x0600-0xffff>

vlan protocol { { eth2 { <etype> | arp | ip | ipx | at } } | { snap { <oui> | rfc-1042 | snap-8021h } <pid> } | { llc <dsap> <ssap> } } group <grp_id>

Parameter

<vlan_list>	ISL VLAN IDs 1-4095
ethertype	Ether type for Custom S-ports
protocol	Protocol-based VLAN commands
s-custom-port	Custom S-ports configuration
<0x0600-0xffff>	Ether type (Range: 0x0600-0xffff>
eth2	Ethernet-based VLAN commands
<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
snap	SNAP-based VLAN group
<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)
llc	LLC-based VLAN group
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
group	Protocol-based VLAN group commands
<word16>	Group Name (Range: 1 - 16 characters)

EXAMPLE

```
SM16TAT2DPA(config)# vlan protocol eth2 ?
   <0x600-0xffff>    Ether Type(Range: 0x600 - 0xFFFF)
   arp               Ether Type is ARP
   at                Ether Type is AppleTalk
```

```
   ip              Ether Type is IP
   ipx             Ether Type is IPX
SM16TAT2DPA(config)# vlan protocol eth2 at ?
   group    Protocol-based VLAN group commands
SM16TAT2DPA(config)# vlan protocol eth2 at group ?
   <word16>    Group Name (Range: 1 - 16 characters)
SM16TAT2DPA(config)# vlan protocol eth2 at group ADMIN ?
   <cr>
SM16TAT2DPA(config)# vlan protocol eth2 at group ADMIN
SM16TAT2DPA(config)#
SM16TAT2DPA(config)# vlan ethertype s-custom-port 0x1111
SM16TAT2DPA(config)# vlan protocol eth2 arp group 123
SM16TAT2DPA(config)#
```

voice

Voice appliance attributes.

SYNTAX

voice vlan

voice vlan aging-time <aging_time>

voice vlan class { <traffic_class> | low | normal | medium | high }

voice vlan oui <oui> [description <description>]

voice vlan vid <vid>

Parameter

advertising-duration	Set advertising duration
vlan	Vlan for voice traffic
aging-time	Set secure learning aging time
<10-10000000>	Aging time, 10-10000000 seconds
class	Set traffic class
<0-7>	Traffic class value
oui	OUI configuration
<oui>	OUI value
description	Set description for the OUI
<line32>	Description line
vid	Set VLAN ID
<vlan_id>	VLAN ID, 1-4095

EXAMPLE

```
SM16TAT2DPA(config)# voice vlan aging-time 3333
SM16TAT2DPA(config)# voice vlan class 7
SM16TAT2DPA(config)# voice vlan vid 3333
SM16TAT2DPA(config)#
```

web

Web.

SYNTAX

web privilege group <CWORD> level { [cro <0-15>] [crw <0-15>] [sro <0-15>] [srw <0-15>] }

Parameter

privilege Web privilege

group Web privilege group

CWORD Valid words are 'ACTIVATE' 'Aggregation' 'DHCP' 'DMS_client' 'DMS_server' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'GARP' 'GVRP' 'Green_Ethernet' 'IP2' 'IPMC_Snooping' 'IP_Phone_Auto_Provisioning' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'POE' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'SMTP' 'Security' 'Spanning_Tree' 'System' 'TS_client' 'TS_server' 'Timer' 'Trap_Event' 'Trouble_Shooting' 'UPnP' 'VCL' 'VLANs' 'VTUN' 'Voice_VLAN' 'XXRP' 'bonjour' 'cloud_management' 'sFlow'

level Web privilege group level (0-15)

cro Configuration Read-only level

crw Configuration Read-write level

sro Status/Statistics Read-only level

srw Status/Statistics Read-write level

EXAMPLE

```
SM16TAT2DPA(config)# web privilege group Ports level crw 15 ?

    cro     Configuration Read-only level

    sro     Status/Statistics Read-only level

    srw     Status/Statistics Read-write level

    <cr>

SM16TAT2DPA(config)# web privilege group Ports level crw 15

SM16TAT2DPA(config)#
```

access-list

Table : configure – access-list Commands

Command	Function
ace	Access list entry
rate-limiter	Rate limiter

rate-limiter

Rate limiter.

SYNTAX

access-list rate-limiter [<1~16>] { pps <0-3276700> | 100kbps <0-10000> }

Parameter

100kbps	100k bits per second
<RateLimiterList : 1~16>	Rate limiter ID
<PpsRate : 0-3276700>	Rate value
<0-10000>	Rate value

EXAMPLE

```
SM16TAT2DPA(config)# access-list rate-limiter 100kbps 111
SM16TAT2DPA(config)#
```

ace

Access list entry.

SYNTAX

access-list ace{ update<1-256> | <1-256> } [action< deny | filter | permit >]

access-list ace{ update<1-256> | <1-256> } [dmac-type < any | broadcast | multicast | unicast >]

access-list ace{ update<1-256> | <1-256> } [frametype < any | arp | etype | ipv4 | ipv4-icmp | ipv4-tcp | ipv4-udp | ipv6 | ipv6-icmp | ipv6-tcp | ipv6-udp >]

access-list ace{ update<1-256> | <1-256> } [ingress] [ingress interface { <port_type> <port_type_id> | <port_type> <port_type_list> } | any }]

access-list ace{ update<1-256> | <1-256> } [logging [disable]]

access-list ace{ update<1-256> | <1-256> } [lookup [disable]]

access-list ace{ update<1-256> | <1-256> } [mirror [disable]]

access-list ace{ update<1-256> | <1-256> } [next { <1-256> | last }]

access-list ace{ update<1-256> | <1-256> } [policy <0-255> [policy-bitmask <0x0-0xFF>]]

access-list ace{ update<1-256> | <1-256> } [rate-limiter { <1-16> | disable }]

access-list ace{ update<1-256> | <1-256> } [redirect | interface { <port_type> <port_type_id> | <port_type> <port_type_list> } | disable }]

access-list ace{ update<1-256> | <1-256> } [shutdown]

access-list ace{ update<1-256> | <1-256> } [tag { tagged | untagged | any }]

access-list ace{ update<1-256> | <1-256> } [tag-priority { <0-7> | any }]

access-list ace{ update<1-256> | <1-256> }[vid { <1-4095> | any }]

Parameter

action	Access list action
dmac-type	The type of destination MAC address
frametype	Frame type
ingress	Ingress
logging	Logging frame information
lookup	Second lookup
mirror	Mirror frame to destination mirror port
next	insert the current ACE before the next ACE ID
policy	Policy
rate-limiter	Rate limiter
redirect	Redirect frame to specific port
shutdown	Shutdown incoming port
tag	Tag

tag-priority	Tag priority
vid	VID field
deny	Deny
filter	Filter
permit	Permit
any	Don't-care the type of destination MAC address
broadcast	Broadcast destination MAC address
multicast	Multicast destination MAC address
unicast	Unicast destination MAC address
any	Don't-care the frame type
arp	Frame type of ARP
etype	Frame type of etype
ipv4	Frame type of IPv4
ipv4-icmp	Frame type of IPv4 ICMP
ipv4-tcp	Frame type of IPv4 TCP
ipv4-udp	Frame type of IPv4 TCP
ipv6	Frame type of IPv4
ipv6-icmp	Frame type of IPv6 ICMP
ipv6-tcp	Frame type of IPv6 TCP
ipv6-udp	Frame type of IPv6 UDP
interface	Select an interface to configure
<port_type>	Gigabitethernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet port
<port_type_id>	Port ID in the format of switch-no/port-no ex, 1/1-18 for Gigabitethernet
<port_type>	* or Gigabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18
any	Don't-care the ingress interface
<0-255>	Policy ID
policy-bitmask	The bitmask for policy ID
<0x0-0xFF>	The value of policy bitmask
<1-4095>	The value of VID field
<0-7>	The value of tag priority

EXAMPLE

```
SM16TAT2DPA(config)# access-list ace 10 action deny
SM16TAT2DPA(config)#
```

3-3 no

Negate a command or set its defaults

Table : configure – no Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a login banner
bonjour	Set bonjour's configurations
clock	Configure time-of-day clock
dms	Disable DMS Master
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
green-ethernet	Green ethernet (Power reduction)
gvrp	Enable GVRP feature
hostname	Set system's network name
interface	none
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP settings
lldp	LLDP configurations.
logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
monitor	Set monitor configuration.
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP
poe	Power Over Ethernet
port-security	Enable/disable port security globally.
privilege	Command privilege parameters
qos	Quality of Service
radius-server	Configure RADIUS

rmon	Remote Monitoring
sflow	Statistics flow.
snmp-server	Enable SNMP server
spanning-tree	STP Bridge
system	Set the SNMP server's configurations
tacacs-server	Configure TACACS+
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	Vlan commands
voice	Voice appliance attributes
web	Web

aaa

Authentication, Authorization and Accounting

SYNTAX

no aaa authentication login { console | telnet | ssh | http }

Parameter

authentication	Authentication
login	Login
console	Disable Console
http	Disable HTTP
ssh	Disable SSH
telnet	Disable Telnet

EXAMPLE

```
SM16TAT2DPA(config)# no aaa authentication  login ssh
SM16TAT2DPA(config)#
```

access

Access management

SYNTAX

no access management [<1~16>]

no access management

Parameter

management	Access management configuration
<1~16>	ID of access management entry

EXAMPLE

```
SM16TAT2DPA(config)# no access management
SM16TAT2DPA(config)#
```

access-list

Access list

SYNTAX

no access-list ace <1~256>

Parameter

ace	Access list entry
<AceId : 1-256>	ACE ID

EXAMPLE

```
SM16TAT2DPA(config)# no access-list ace 1
SM16TAT2DPA(config)#
```

aggregation

Aggregation mode

SYNTAX

no aggregation mode

Parameter

mode	Traffic distribution mode

EXAMPLE

```
SM16TAT2DPA(config)# no aggregation mode
SM16TAT2DPA(config)#
```

banner

Define a login banner

SYNTAX

no banner [motd]

no banner exec

no banner login

Parameter

exec	Set EXEC process creation banner
login	Set login banner
motd	Set Message of the Day banner

EXAMPLE

```
SM16TAT2DPA(config)# no banner login
SM16TAT2DPA(config)#
```

clock

Configure time-of-day clock

SYNTAX

no clock summer-time

no clock timezone

Parameter

summer-time	Configure summer (daylight savings) time
timezone	Configure time zone

EXAMPLE

```
SM16TAT2DPA(config)# no clock summer-time
SM16TAT2DPA(config)# no clock timezone
SM16TAT2DPA(config)#
```

dot1x

IEEE Standard for port-based Network Access Control

SYNTAX

no dot1x authentication timer inactivity

no dot1x authentication timer re-authenticate

no dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }

no dot1x guest-vlan [supplicant]

no dot1x max-reauth-req

no dot1x re-authentication

no dot1x system-auth-control

no dot1x timeout quiet-period

no dot1x timeout tx-period

Parameter

authentication	Authentication
feature	Globally enables/disables a dot1x feature functionality
guest-vlan	Guest VLAN
max-reauth-req	The number of time a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN.
re-authentication	Set Re-authentication state
system-auth-control	Set the global NAS state
timeout	timeout
timer	timer
inactivity	Time in seconds between check for activity on successfully authenticated MAC addresses.
re-authenticate	The period between re-authentication attempts in seconds
guest-vlan	Globally enables/disables state of guest-vlan
radius-qos	Globally enables/disables state of RADIUS-assigned QoS.
radius-vlan	Globally enables/disables state of RADIUS-assigned VLAN.
supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest VLAN, it will first check if this option is enabled or disabled. If disabled (unchecked; default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port for the life-time of the port. If enabled (checked), the switch will consider

	entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.
quiet-period	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.
tx-period	the time between EAPOL retransmissions.

EXAMPLE

```
SM16TAT2DPA(config)# no dot1x authentication timer inactivity
SM16TAT2DPA(config)# no dot1x feature guest-vlan radius-qos
radius-vlan
SM16TAT2DPA(config)# no dot1x guest-vlan supplicant
SM16TAT2DPA(config)# no dot1x max-reauth-req
SM16TAT2DPA(config)# no dot1x re-authentication
SM16TAT2DPA(config)# no dot1x system-auth-control
SM16TAT2DPA(config)# no dot1x timeout tx-period
```

enable

Modify enable password parameters

SYNTAX

no enable password [level <1-15>]

no enable secret [0|5 { level <1-15> }]

Parameter

password	Assign the privileged level clear password
secret	Assign the privileged level secret
0	Specifies an UNENCRYPTED password will follow
5	Specifies an ENCRYPTED password will follow
level	Set exec level password
<1-15>	Level number

EXAMPLE

```
SM16TAT2DPA(config)# no enable secret level 15
SM16TAT2DPA(config)# no enable password level 15
SM16TAT2DPA(config)#
```

gvrp

Enable GVRP feature.

SYNTAX

gvrp

gvrp max-vlans <maxvlans>

gvrp time { [join-time <jointime>] [leave-time <leavetime>] [leave-all-time <leavealltime>] }*1

Parameter

max-vlans	Number of simultaniously VLANs that GVRP can control
time	Config GARP protocol timer parameters. IEEE 802.1D-2004, clause 12.11.
join-time	Set GARP protocol parameter JoinTime. See IEEE 802.1D-2004, clause 12.11
leave-all-time	Set GARP protocol parameter LeaveAllTime. See IEEE 802.1D-2004, clause 12.11
leave-time	Set GARP protocol parameter LeaveTime. See IEEE 802.1D-2004, clause 12.11

EXAMPLE

```
SM16TAT2DPA(config)#no gvrp max-vlans 1
SM16TAT2DPA(config)#no gvrp time join-time 10
SM16TAT2DPA(config)#no gvrp time leave-all-time 2000
SM16TAT2DPA(config)#no gvrp time leave-time 70
SM16TAT2DPA(config)#
```

hostname

Set system's network name.

SYNTAX

no hostname

EXAMPLE

```
SM16TAT2DPA(config)# no hostname
SM16TAT2DPA(config)#
```

interface

SYNTAX

no interface vlan < vlan_list >

Parameter

vlan	Vlan interface configurations
<vlan_list>	Vlan list

EXAMPLE

```
SM16TAT2DPA(config)# no interface vlan 10
SM16TAT2DPA(config)#
```

Ip

Set system's network name.

SYNTAX

no ip arp inspection

no ip arp inspection entry interface Gigabitethernet <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>

no ip arp inspection vlan <vlan_list> [logging]

no dhcp execluded-address [<ip_address> [<ip_address>]]

no dhcp pool <WORD>

no ip dhcp relay [information {option| policy }]

no ip dhcp server

no ip dhcp snooping

no ip dns proxy

no ip helper-address

no ip http secure-redirect

no ip http secure-server

no ip igmp host-proxy [leave-proxy]

no ip igmp snooping

no ip igmp snooping vlan [<vlan_list>]

no ip igmp ssm-range

no ip igmp unknown-flooding

no ip name-server

no ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>

no ip routing

no ip source binding interface Gigabitethernet <port_type_id> <vlan_id>

<ipv4_ucast>{ <ipv4_netmask>|<mac_ucast>}

no ip ssh

no ip verify source

Parameter

arp	Address Resolution Protocol
inspection	ARP inspection
entry	arp inspection entry
interface	arp inspection entry interface config
GigabitEthernet	1 Gigabit Ethernet Port
<port_type_id>	Port ID in the format of switch-no/port-no, 1/1-18 for Gigabitetherne

<vlan_id>	Select a VLAN id to configure
<mac_ucast>	Select a MAC address to configure
<ipv4_ucast>	Select an IP Address to configure
vlan	arp inspection vlan setting
<vlan_list>	arp inspection vlan list
logging	ARP inspection vlan logging mode config
dhcp	Dynamic Host Configuration Protocol
execluded-address	Prevent DHCP from assigning certain address
<ip_address>	Low IP address and High IP address
<WORD>	Pool name in 32 characters
pool	Configure DHCP address pools
relay	DHCP relay agent configuration
server	enable DHCP server
snoping	DHCP snooping
information	DHCP information option(Option 82)
option	DHCP option
policy	Policy for handling the receiving DHCP packet already include the information option
snooping	DHCP snooping
dns	Domain Name System
proxy	DNS proxy service
helper-address	None.
http	Hypertext Transfer Protocol
secure-redirect	Secure HTTP web rediction
secure-server	Secure HTTP web server
igmp	Internet Group Management Protocol
host-proxy	IGMP proxy configuration
leave-proxy	IGMP proxy for leave configuration
snooping	Snooping IGMP
vlan	IGMP VLAN
<vlan_list>	VLAN identifier(s): VID
ssm-range	IPv4 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv4 multicast traffic
name-server	Domain Name System
Route	none
<ipv4_addr>	Network
<ipv4_netmask>	Netmask

<ipv4_gateway>	Gateway
routing	Disable routing for IPv4 and IPv6
source	source command
binding	ip source binding
interface	ip source binding entry interface config
Gigabitethernet	1 Gigabitethernet port
<port_type_id>	Port ID in the format of switch-no/port-no, ex., 1/1-18 for Gigabitethernet
<vlan_id>	Select a VLAN id to configure
<ipv4_ucast>	Select an IP Address to configure
<ipv4_netmask>	Select a subnet mask to configure
<mac_ucast>	Select a MAC address to configure
ssh	Secure Shell
verify	verify command
source	verify source

EXAMPLE

```
SM16TAT2DPA(config)# no ip arp inspection vlan 3 logging
SM16TAT2DPA(config)# no ip dhcp relay information option
SM16TAT2DPA(config)# no ip dns proxy
SM16TAT2DPA(config)# no ip helper-address
SM16TAT2DPA(config)# no ip http secure-redirect
SM16TAT2DPA(config)# no ip igmp snooping
SM16TAT2DPA(config)# no ip name-server
SM16TAT2DPA(config)# no ip routing
SM16TAT2DPA(config)# no ip ssh
SM16TAT2DPA(config)# no ip verify source
SM16TAT2DPA(config)#
```

ipmc

IPv4/IPv6 multicast configuration

SYNTAX

no ipmc profile <Profilename : word16>

no ipmc range <Entryname : word16>

Parameter

profile IPMC profile configuration

<Profilename : word16> Profile name in 16 char's

range A range of IPv4/IPv6 multicast addresses for the profile

<Entryname : word16> Range entry name in 16 characters

EXAMPLE

```
SM16TAT2DPA(config)# no ipmc profile
```

ipv6

IPv6 configuration commands

SYNTAX

no ipv6 mld host-proxy [leave-proxy]

no ipv6 mld snooping

no ipv6 mld snooping [vlan <vlan_list>]

no ipv6 mld ssm-range

no ipv6 mld unknown-flooding

no ipv6 route <ipv6_subnet> { <ipv6_ucast> | interface vlan <vlan_id> <ipv6_linklocal> }

Parameter

mld	Multicasat Listener Discovery
host-proxy	MLD proxy configuration
leave-proxy	MLD proxy for leave configuration
snooping	Snooping MLD
vlan	MLD VLAN
<vlan_list>	VLAN identifier(s): VID
ssm-range	IPv6 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv6 multicast traffic
route	Configure static routes
<ipv6_subnet>	IPv6 prefix x:x::y/z
<ipv6_ucast>	IPv6 unicast address (except link-local address) of next-hop
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID
<ipv6_linklocal>	IPv6 link-local address of next-hop

EXAMPLE

```
SM16TAT2DPA(config)# no ipv6 mld snooping
SM16TAT2DPA(config)#
```

lacp

LACP settings

SYNTAX

no lacp system-priority <1-65535>

Parameter

system-priority	System priority
<1-65535>	Priority value, lower means higher priority

EXAMPLE

```
SM16TAT2DPA(config)# no lacp system-priority 10000
SM16TAT2DPA(config)#
```

lldp

LLDP configurations.

SYNTAX

no lldp holdtime

no lldp med datum

no lldp med fast

no lldp med location-tlv altitude

no lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code }

no lldp med location-tlv elin-addr

no lldp med location-tlv latitude

no lldp med location-tlv longitude

no lldp med media-vlan-policy <0~31>

no lldp reinit

no lldp timer

no lldp transmission-delay

Parameter

holdtime	Sets LLDP hold time (The neighbor switch will discarded the LLDP information after "hold time" multiplied with "timer" seconds).
med	Media Endpoint Discovery.
reinit	Sets LLDP reinitialization delay.
timer	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).
tlv-select	Which optional TLVs to transmit.
transmission-delay	Sets LLDP transmision-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will be delayed after LLDP configuration has changed) in seconds.)
datum	Set datum to default value.
fast	Set fast repeat count to default value.
location-tlv	LLDP-MED Location Type Length Value parameter.
media-vlan-policy	Use the media-vlan-policy to create a policy, which can be assigned to an interface.
altitude	Setting altitude to default.
civic-addr	Civic address information and postal information
elin-addr	Set elin address to default value.

latitude	Setting Latitude parameter to default.
longitude	Setting longitude to default.
additional-code	Additional code - Example: 1320300003.
additional-info	Additional location info - Example: South Wing.
apartment	Unit (Apartment, suite) - Example: Apt 42.
block	Neighbourhood, block.
building	Building (structure) - Example: Low Library.
city	City, township, shi (Japan) - Example: Copenhagen.
country	The two-letter ISO 3166 country code in capital ASCII letters - Eg: DK, DE or US.
county	County, parish, gun (Japan), district.
district	City division, borough, city district, ward, chou (Japan).
floor	Floor - Example: 4.
house-no	House number - Example: 21.
house-no-suffix	House number suffix - Example: A, 1/2.
landmark	Landmark or vanity address - Example: Columbia University.
leading-street-direction	Leading street direction - Example: N.
name	Name (residence and office occupant) - Example: Flemming Jahn.
p-o-box	Post office box (P.O. BOX) - Example: 12345.
place-type	Place type - Example: Office.
postal-community-name	Postal community name - Example: Leonia.
room-number	Room number - Example: 450F.
state	National subdivisions (state, canton, region, province, prefecture).
street	Street - Example: Poppelvej.
street-suffix	Street suffix - Example: Ave, Platz.
trailing-street-suffix	Trailing street suffix - Example: SW.
zip-code	Postal/zip code - Example: 2791.
<0~31>	Policy to delete.

EXAMPLE

```
SM16TAT2DPA(config)# no lldp holdtime
SM16TAT2DPA(config)# no lldp med location-tlv civic-addr floor
SM16TAT2DPA(config)# no lldp reinit
SM16TAT2DPA(config)# no lldp timer
SM16TAT2DPA(config)# no lldp transmission-delay
SM16TAT2DPA(config)#
```

logging

Syslog.

SYNTAX

no logging host

no logging on

Parameter

host	host
on	Enable syslog server

EXAMPLE

```
SM16TAT2DPA(config)# no logging host
SM16TAT2DPA(config)# no logging on
SM16TAT2DPA(config)#
```

loop-protect

Loop protection configuration

SYNTAX

no loop-protect

no loop-protect shutdown-time

no loop-protect transmit-time

Parameter

shutdown-time	Loop protection shutdown time interval
transmit-time	Loop protection transmit time interval

EXAMPLE

```
SM16TAT2DPA(config)# no loop-protect shutdown-time
SM16TAT2DPA(config)# no loop-protect transmit-time
SM16TAT2DPA(config)#
```

mac

MAC table entries/configuration

SYNTAX

no mac address-table aging-time [<0,10-1000000>]

no mac address-table static <mac_addr> vlan <vlan_id> interface {*|Gigabitethernet [<port_type_list>]}

Parameter

address-table	Mac table entries configuration/table
aging-time	Mac address aging time
<0,10-1000000>	Aging time in seconds, 0 disables aging
static	Static MAC address
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN keyword
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
Gigabitethernet	1 Gigabit Ethernet port
<port_type_list>	Port list in 1/1-18 for Gigaethernet

EXAMPLE

```
SM16TAT2DPA(config)# no mac address-table aging-time 10000
SM16TAT2DPA(config)#
```

monitor

Set monitor configuration.

SYNTAX

no monitor destination

no monitor source { interface Gigabitethernet <port_type_list> | cpu}

Parameter

source	The source port(s). That is the ports to be mirrored to the destination port.l
cpu	Mirror CPU traffic.
interface	Mirror Interface traffic.
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA(config)# no monitor destination
SM16TAT2DPA(config)# no monitor source cpu
SM16TAT2DPA(config)#
```

mvr

Multicast VLAN Registration configuration.

SYNTAX

no mvr

no mvr name <word16> channel

no mvr name <word16> frame priority

no mvr name <word16> frame tagged

no mvr name <word16> igmp-address

no mvr name <word16> last-member-query-interval

no mvr name <word16> mode

no mvr vlan <vlan_list>

no mvr vlan <vlan_list> channel

no mvr vlan <vlan_list> frame priority

no mvr vlan <vlan_list> frame tagged

no mvr vlan <vlan_list> igmp-address

no mvr vlan <vlan_list> last-member-query-interval

no mvr vlan <vlan_list> mode [{channel | frame | igmp-address | last-member-query-interval}

Parameter

name	MVR multicast name
<word16>	MVR multicast VLAN name
channel	MVR channel configuration
frame	MVR control frame in TX
priority	Interface CoS priority
tagged	Tagged IGMP/MLD frames will be sent
igmp-address	MVR address configuration used in IGMP
last-member-query-interval	Last Member Query Interval in tenths of seconds
mode	MVR mode of operation
vlan	MVR multicast vlan
<vlan_list>	MVR multicast VLAN list

EXAMPLE

```
SM16TAT2DPA(config)# no mvr vlan 12 mode
SM16TAT2DPA(config)#
```

ntp

Configure NTP.

SYNTAX

no ntp

no ntp server <1-5>

Parameter

server Configure NTP server

<1-5> index number

EXAMPLE

```
SM16TAT2DPA(config)# no ntp server 2
SM16TAT2DPA(config)#
```

port-security

Enable/disable port security globally.

SYNTAX

no port-security

no port-security aging

no port-security aging time

Parameter

aging Enable/disable port security aging.

time Time in seconds between check for activity on learned MAC addresses.

EXAMPLE

```
SM16TAT2DPA(config)# no port-security aging time
SM16TAT2DPA(config)#
```

radius-server

Configure RADIUS.

SYNTAX

no radius-server attribute {32 | 4 | 95}

no radius-server deadtime

no radius-server host { <word1-255> | <ipv4_ucast> | <ipv6_ucast> } [auth-port <0-65535>] [acct-port <0-65535>]

no radius-server key

no radius-server retransmit

no radius-server timeout

Parameter

Attribute	
deadtime	Time to stop using a RADIUS server that doesn't respond
host	Specify a RADIUS server
key	Set RADIUS encryption key
retransmit	Specify the number of retries to active server
timeout	Time to wait for a RADIUS server to reply

EXAMPLE

```
SM16TAT2DPA(config)# no radius-server attribute 4
SM16TAT2DPA(config)# no radius-server deadtime
SM16TAT2DPA(config)# no radius-server key
SM16TAT2DPA(config)# no radius-server retransmit
SM16TAT2DPA(config)# no radius-server timeout
SM16TAT2DPA(config)#
```

rmon

Remote Monitoring.

SYNTAX

no rmon alarm <alarm : 1-65535>

no rmon event<event : 1-65535>

Parameter

alarm	Configure an RMON alarm
event	Configure an RMON event
<alarm : 1-65535>	Alarm entry ID
<event: 1-65535>	Event entry ID

EXAMPLE

```
SM16TAT2DPA(config)# no rmon alarm 1000
SM16TAT2DPA(config)#
```

sflow

Statistics flow.

SYNTAX

no sflow agent-ip

no sflow collector-address

no sflow collector-port

no sflow max-datagram-size

no sflow timeout

Parameter

agent-ip	Sets the agent IP address used as agent-address in UDP datagrams to 127.0.0.1.
collector-address	Collector address
collector-port	Collector UDP port
max-datagram-size	Maximum datagram size.
timeout	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.

EXAMPLE

```
SM16TAT2DPA(config)# no sflow agent-ip
SM16TAT2DPA(config)# no sflow collector-address
SM16TAT2DPA(config)# no sflow collector-port
SM16TAT2DPA(config)# no sflow max-datagram-size
SM16TAT2DPA(config)# no sflow timeout
SM16TAT2DPA(config)#
```

snmp-server

Enable SNMP server.

SYNTAX

no snmp-server

no snmp-server access <Groupname : word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv }

no snmp-server community v2c

no snmp-server community v3 <Community : word127>

no snmp-server contact

no snmp-server engined-id local

no snmp-server host <Conf : word32>

no snmp-server location

no snmp-server security-to-group model { v1 | v2c | v3 } name <Securityname : word32>

no snmp-server trap

no snmp-server user <Username : word32> engine-id <Engineid : word10-32>

no snmp-server version

no snmp-server view <Viewname : word32> <Oidsubtree : word255>

Parameter

access	access configuration
<Groupname : word32>	group name
model	security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
any	any security model
level	security level
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
community	Set the SNMP community
contact	Clear the SNMP server's contact string
engined-id	Set SNMP engine ID
host	Set SNMP host's configurations
location	Clear the SNMP server's location string
security-to-group	security-to-group configuration

trap	Set trap's configurations
user	user who can access SNMP server
version	Set the SNMP server's version
view	MIB view configuration
<Community : word127>	
local	Set SNMP local engine ID
<ConfName : word32>	Name of the host configuration
model	security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<SecurityName : word32>	security user name
<Username : word32>	name of user
engine-id	engine ID
<Engineid : word10-32>	engine ID octet string
<Viewname : word32>	MIB view name
<Oidsubtree : word255>	MIB view OID

EXAMPLE

```
SM16TAT2DPA(config)# no snmp-server access 333 model any level auth
SM16TAT2DPA(config)# no snmp-server community v2c
SM16TAT2DPA(config)# no snmp-server engined-id local
SM16TAT2DPA(config)# no snmp-server host 333
SM16TAT2DPA(config)# no snmp-server location
SM16TAT2DPA(config)# no snmp-server security-to-group model v2c name
132
SM16TAT2DPA(config)# no snmp-server trap
SM16TAT2DPA(config)# no snmp-server version
SM16TAT2DPA(config)#
```

spanning-tree

STP Bridge.

SYNTAX

no spanning-tree edge bpdu-filter

no spanning-tree edge bpdu-guard

no spanning-tree mode

no spanning-tree mst <instance> priority

no spanning-tree mst <instance> vlan

no spanning-tree mst forward-time

no spanning-tree mst max-age

no spanning-tree mst max-hops

no spanning-tree mst name

no spanning-tree recovery interval

no spanning-tree transmit hold-count

Parameter

edge	Edge ports
mode	STP protocol mode
mst	STP bridge instance
recovery	The error recovery timeout
transmit	BPDUs to transmit
bpdu-filter	Enable BPDU filter (stop BPDU tx/rx)
bpdu-guard	Enable BPDU guard
<Instance : 0-7>	instance 0-7 (CIST=0, MST2=1...)
priority	Priority of the instance
forward-time	Delay between port states
max-age	Max bridge age before timeout
max-hops	MSTP bridge max hop count
name	Name keyword
vlan	VLAN keyword
interval	The interval
hold-count	Max number of transmit BPDUs per sec
<Holdcount : 1-10>	1-10 per sec, 6 is default

EXAMPLE

```
SM16TAT2DPA(config)# no spanning-tree edge bpdu-filter
SM16TAT2DPA(config)# no spanning-tree mode
SM16TAT2DPA(config)# no spanning-tree mst max-age
SM16TAT2DPA(config)# no spanning-tree recovery interval
SM16TAT2DPA(config)# no spanning-tree transmit hold-count
SM16TAT2DPA(config)#
```

tacacs-server

Configure TACACS+.

SYNTAX

no tacacs-server deadtime

no tacacs-server host <host_name> [port <port>]

no tacacs-server key

no tacacs-server timeout

Parameter

deadtime	Time to stop using a TACACS+ server that doesn't respond
host	Specify a TACACS+ server
<Hostname : word1-255>	Host name or IP address
key	Set TACACS+ encryption key
timeout	Time to wait for a TACACS+ server to reply
key	Server specific key (overrides default)
port	TCP port for TACACS+ server
timeout	Time to wait for this TACACS+ server to reply (overrides default)
<Port : 0-65535>	TCP port number

EXAMPLE

```
SM16TAT2DPA(config)# no tacacs-server deadtime
SM16TAT2DPA(config)# no tacacs-server host 192.168.1.1 port 10000
SM16TAT2DPA(config)# no tacacs-server key
SM16TAT2DPA(config)# no tacacs-server timeout
SM16TAT2DPA(config)#
```

upnp

Set UPnP's configurations.

SYNTAX

no upnp

no upnp advertising-duration

no upnp ttl

Parameter

advertising-duration	Set advertising duration
ttl	Set TTL value

EXAMPLE

```
SM16TAT2DPA(config)# no upnp advertising-duration
SM16TAT2DPA(config)# no upnp ttl
SM16TAT2DPA(config)#
```

username

Establish User Name Authentication.

SYNTAX

no username <Username : word31>

Parameter

<Username : word31>	User name allows letters, numbers and underscores

EXAMPLE

```
SM16TAT2DPA(config)# no username admin
SM16TAT2DPA(config)#
```

vlan

Vlan commands.

SYNTAX

no 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>

no vlan { [ethertype s-custom-port] | <vlan_list> }

Parameter

protocol	Protocol-based VLAN commands
eth2	Ethernet-based VLAN commands
<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
snap	SNAP-based VLAN group
<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)
llc	LLC-based VLAN group
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
group	Protocol-based VLAN group commands
<word16>	Group Name (Range: 1 - 16 characters)
<vlan_list>	Vlan list
ethertype	_____
s-custom-port	_____

EXAMPLE

```
SM16TAT2DPA(config)# no vlan 3
SM16TAT2DPA(config)# no vlan ethertype s-custom-port
SM16TAT2DPA(config)#
```

voice

Voice appliance attributes.

SYNTAX

no voice vlan

no voice vlan aging-time

no voice vlan class

no voice vlan oui <oui>

no voice vlan vid

Parameter

vlan	Vlan for voice traffic
aging-time	Set secure learning aging time
class	Set traffic class
oui	OUI configuration
<oui>	Traffice class value
vid	Set VLAN ID

EXAMPLE

```
SM16TAT2DPA(config)# no voice vlan vid
SM16TAT2DPA(config)# no voice vlan class
SM16TAT2DPA(config)# no voice vlan aging-time
SM16TAT2DPA(config)#
```

web

Web.

SYNTAX

no web privilege group [<group_name>] level

Parameter

privilege	Web privilege
group	Web privilege group
<CWORD>	Valid words are 'Aggregation' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'GARP' 'GVRP' ''Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MEP' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'POE' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'UPnP' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow'
level	Web privilege group level

EXAMPLE

```
SM16TAT2DPA(config)# no web privilege group LACP level
SM16TAT2DPA(config)#
```

3-4 qos

Table : configure – qos Commands

Command	Function
map	Global QoS Map/Table
qce	QoS Control Entry
storm	Storm policer

map

Global QoS Map/Table.

SYNTAX

qos map cos-dscp <0~7> dpl <dpl : 0~1> dscp { <DscpNum : 0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }

qos map dscp-classify { <dscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }

qos map dscp-cos { < dscpNum : 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 <Cos : 0-7> dpl <dpl>

qos map dscp-egress-translation { < DscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } <Dpl : 0~1> to { <Dscpnum : 0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }

qos map dscp-ingress-translation { < DscpNum : 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 { < DscpNum : 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

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
dpl	Specify drop precedence level
<Dpl : 0~1>	Specific drop precedence level or range
dscp	Specify DSCP

<DscpNum : 0-63>	Specific DSCP
cos	Specify class of QoS
<Cos : 0-7>	Specific class of QoS
af11	Assured Forwarding PHB AF11(DSCP 10)
af12	Assured Forwarding PHB AF12(DSCP 12)
af13	Assured Forwarding PHB AF13(DSCP 14)
af21	Assured Forwarding PHB AF21(DSCP 18)
af22	Assured Forwarding PHB AF22(DSCP 20)
af23	Assured Forwarding PHB AF23(DSCP 22)
af31	Assured Forwarding PHB AF31(DSCP 26)
af32	Assured Forwarding PHB AF32(DSCP 28)
af33	Assured Forwarding PHB AF33(DSCP 30)
af41	Assured Forwarding PHB AF41(DSCP 34)
af42	Assured Forwarding PHB AF42(DSCP 36)
af43	Assured Forwarding PHB AF43(DSCP 38)
be	Default PHB(DSCP 0) for best effort traffic
cs1	Class Selector PHB CS1 precedence 1(DSCP 8)
cs2	Class Selector PHB CS2 precedence 2(DSCP 16)
cs3	Class Selector PHB CS3 precedence 3(DSCP 24)
cs4	Class Selector PHB CS4 precedence 4(DSCP 32)
cs5	Class Selector PHB CS5 precedence 5(DSCP 40)
cs6	Class Selector PHB CS6 precedence 6(DSCP 48)
cs7	Class Selector PHB CS7 precedence 7(DSCP 56)
ef	Expedited Forwarding PHB(DSCP 46)
va	Voice Admit PHB(DSCP 44)

EXAMPLE

```
SM16TAT2DPA(config)# qos map cos-dscp 5 dpl 1 dscp 20
SM16TAT2DPA(config)#
```

qce

QoS Control Entry.

SYNTAX

qos qce refresh

qos qce { [update] } <Id : 1-256> [{ next <Id : 1-256> } | last] [ingress interface *|Gigabitethernet <PORT_LIST>] [tag { tagged | untagged | any }] [vid { <vlan_list> | any }] [pcp { <pcp> | any }] [dei { <Dpl : 0-1> | any }] [smac { <mac_addr> | <oui> | any }] [dmac-type { unicast | multicast | broadcast | any }] [frametype { any | { etype [{ <0x600-0x7ff,0x801-0x86dc,0x86de-0xffff> | any }] } | { llc [dsap { <0-0xff> | any }] [ssap { <0-0xff> | any }] [control { <0-0xff> | any }] } | { snap [{ <0-0xffff> | any }] } | { ipv4 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [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 } | any }] [frag { yes | no | any }] [sport { <0~65535> | any }] [dport { <0~65535> | any }] } | { ipv6 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [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 } | any }] [sport { <0~65535> | any }] [dport { <0~65535> | any }] } }] [action { [cos { <0-7> | default }] [dpl { <0-1> | default }] [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 } | default }] }]

Parameter

<Id : 1-256>	QCE ID
refresh	Refresh QCE tables in hardware
update	Update an existing QCE
action	Specify action
dei	Specify DEI (Drop Eligible Indicator)
dmac-type	Specify DMAC type
frametype	Specify frame type
ingress	Ingress interfaces
last	Place QCE at the end
next	Place QCE before the next QCE ID
pcp	Specify PCP (Priority Code Point)
smac	Specify SMAC. If 'qos qce dmac-dip' is set, this parameter specifies the DMAC
tag	Specify tag options
vid	Specify VLAN ID
cos	Specify class of service
dpl	Specify drop precedence level

dscp	Specify DSCP
cos	Specify class of service
<Cos : 0-7>	Specific class of service
default	Keep default class of service
<Dpl : 0-1>	Specific drop precedence level
default	Keep default drop precedence level
<Dscp : 0-63>	Specific DSCP
af11	Assured Forwarding PHB AF11(DSCP 10)
af12	Assured Forwarding PHB AF12(DSCP 12)
af13	Assured Forwarding PHB AF13(DSCP 14)
af21	Assured Forwarding PHB AF21(DSCP 18)
af22	Assured Forwarding PHB AF22(DSCP 20)
af23	Assured Forwarding PHB AF23(DSCP 22)
af31	Assured Forwarding PHB AF31(DSCP 26)
af32	Assured Forwarding PHB AF32(DSCP 28)
af33	Assured Forwarding PHB AF33(DSCP 30)
af41	Assured Forwarding PHB AF41(DSCP 34)
af42	Assured Forwarding PHB AF42(DSCP 36)
af43	Assured Forwarding PHB AF43(DSCP 38)
be	Default PHB(DSCP 0) for best effort traffic
cs1	Class Selector PHB CS1 precedence 1(DSCP 8)
cs2	Class Selector PHB CS2 precedence 2(DSCP 16)
cs3	Class Selector PHB CS3 precedence 3(DSCP 24)
cs4	Class Selector PHB CS4 precedence 4(DSCP 32)
cs5	Class Selector PHB CS5 precedence 5(DSCP 40)
cs6	Class Selector PHB CS6 precedence 6(DSCP 48)
cs7	Class Selector PHB CS7 precedence 7(DSCP 56)
default	Keep default DSCP
ef	Expedited Forwarding PHB(DSCP 46)
va	Voice Admit PHB(DSCP 44)
any	Any
broadcast	Broadcast
multicast	Multicast
unicast	Unicast
etype	Ethernet frames
ipv4	IPv4 frames

ipv6	IPv6 frames
llc	LLC frames
snap	SNAP frames
<Etype : 0x600-0x7ff,0x801-0x86dc,0x86de-0xffff>	Specific EtherType
interface	Interfaces
<Next : 1-256>	The next QCE ID
<Pcp : pcp>	Specific PCP (0-7) or range (0-1, 2-3, 4-5, 6-7, 0-3 or 4-7)
<Smac : mac_addr>	Specific SMAC (XX-XX-XX-XX-XX-XX)
tagged	Tagged frames only
untagged	Untagges frames only
<Vid : vlan_list>	Specific VLAN ID or range
interface	Interfaces
Gigabitethernet	1 Gigabit Ethernet Port
<PORT_LIST>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA(config)# qos qce 100 tag vid any action cos 6
SM16TAT2DPA(config)#
```

storm

Storm policer.

SYNTAX

qos storm { unicast | multicast | broadcast } <Rate : 1,2,4,8,16,32,64,128,256,512,1024> [kfps]

Parameter

broadcast	Police broadcast frames
multicast	Police multicast frames
unicast	Police unicast frames
<Rate : 1,2,4,8,16,32,64,128,256,512,1024>	Policer rate (default fps)
kfps	Rate is kfps

EXAMPLE

```
SM16TAT2DPA(config)# qos storm broadcast 256 kfps
SM16TAT2DPA(config)#
```

3-5 snmp-server

Set SNMP server's configurations.

SYNTAX

snmp-server

Table : configure –snmp-server Commands

Command	Function
access	access configuration
community	Set the SNMP community
contact	Set the SNMP server's contact string
engine-id	Set SNMP engine ID
host	Set SNMP host's configurations
location	Set the SNMP server's location string
security-to-group	security-to-group configuration
trap	Set trap's configurations
user	Set the SNMPv3 user's configurations
version	Set the SNMP server's version
view	MIB view configuration

access

access configuration.

SYNTAX

snmp-server access <GroupName : word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv } [read <ViewName : word255>] [write <WriteName : word255>]

Parameter

<GroupName : word32>	group name
model	security model
any	any security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
level	security level
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
read	specify a read view for the group
write	specify a write view for the group
<ViewName : word255>	read view name
<WriteName : word255>	write view name

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server access text model v2c level noauth write text
SM16TAT2DPA(config)#
```

community

Set the SNMP community.

SYNTAX

snmp-server community v2c <Community : word127> [ro | rw]

snmp-server community v3 <word127> [<ipv4_addr> <ipv4_netmask>]

Parameter

v2c	SNMPv2c
<Community : word127>	Community word
ro	Read only
rw	Read write
v3	SNMPv3
<Community : word127>	Community word
<ipv4_addr>	IPv4 address
<ipv4_netmask>	IPv4 netmask

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server community v2c text
SM16TAT2DPA(config)#
```

contact

Set the SNMP server's contact string.

SYNTAX

snmp-server contact <line255>

Parameter

contact	Set the SNMP server's contact string
<line255>	contact string

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server contact text
SM16TAT2DPA(config)#
```

engine-id

Set SNMP engine ID.

SYNTAX

snmp-server engine-id local <Engineid : word10-32>

Parameter

local	Set SNMP local engine ID
<Engineid : word10-32>	local engine ID

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server engine-id local 1234567891
SM16TAT2DPA(config)#
```

host

Set SNMP host's configurations.

SYNTAX

snmp-server host <word32>

Parameter

<word32>	Name of the host configuration

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server host text
SM16TAT2DPA(config-snmps-host)#
```

location

Set the SNMP server's location string.

SYNTAX

snmp-server location <line255>

Parameter

<line255>	location string

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server location text
SM16TAT2DPA(config)#
```

security-to-group

security-to-group configuration.

SYNTAX

snmp-server security-to-group model { v1 | v2c | v3 } name <SecurityName : word32> group <GroupName : word32>

Parameter

model	security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<SecurityName : word32>	security user name
group	security group
<GroupName : word32>	security group name

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server security-to-group model v2c name text group text
SM16TAT2DPA(config)#
```

trap

Set trap's configurations.

SYNTAX

snmp-server trap

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server trap
SM16TAT2DPA(config)#
```

user

Set the SNMPv3 user's configurations.

SYNTAX

snmp-server user <Username : word32> engine-id <Engineid : word10-32> [{ md5 <Md5Passwd : word8-32> | sha <ShaPasswd : word8-40> } [priv { des | aes } <word8-32>]]

Parameter

<Username : word32>	Username
engine-id	engine ID
<Engineid : word10-32>	Engine ID octet string
md5	Set MD5 protocol
<Md5Passwd : word8-32>	MD5 password
sha	Set SHA protocol
<ShaPasswd word8-40>	SHA password
priv	Set Privacy
des	Set DES protocol
aes	Set AES protocol
<word8-32>	Set privacy password

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server user text engine-id 1234567891 md5 12345678 priv
aes 12345678
SM16TAT2DPA(config)#
```

version

Set the SNMP server's version.

SYNTAX

snmp-server version { v1 | v2c | v3 }

Parameter

v1	SNMPv1
v2c	SNMPv2c
v3	SNMPv3

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server version v2c
SM16TAT2DPA(config)#
```

view

MIB view configuration.

SYNTAX

snmp-server view <ViewName : word32> <OidSubtree : word255> { include | exclude }

Parameter

<ViewName : word32>	MIB view name
<OidSubtree : word255>	MIB view OID
include	Ixcluded type from the view
exclude	Excluded type from the view

EXAMPLE

```
SM16TAT2DPA(config)# snmp-server view text .1 include
SM16TAT2DPA(config)#
```

3-6 spanning-tree

Spanning Tree protocol)STP).

Table : configure –spanning-tree Commands

Command	Function
aggregation	Aggregation mode
edge	Edge ports
mode	STP protocol mode
mst	STP bridge instance
recovery	The error recovery timeout
transmit	BPDUs to transmit

aggregation

Aggregation mode.

SYNTAX

spanning-tree aggregation

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree  aggregation
SM16TAT2DPA(config-stp-aggr)#
```

edge

Edge ports.

SYNTAX

spanning-tree edge bpdu-filter

spanning-tree edge bpdu-guard

Parameter

bpdu-filter Enable BPDU filter (stop BPDU tx/rx)

bpdu-guard Enable BPDU guard

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree edge bpdu-filter
SM16TAT2DPA(config)#
```

mode

STP protocol mode.

SYNTAX

spanning-tree mode { stp | rstp | mstp }

Parameter

mstp	Multiple Spanning Tree (802.1s)
rstp	Rabid Spanning Tree (802.1w)
stp	802.1D Spanning Tree

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree mode stp
SM16TAT2DPA(config)#
```

mst

STP bridge instance.

SYNTAX

spanning-tree mst <Instance : 0-7> priority <Prio : 0-61440>

spanning-tree mst < Instance : 0-7> vlan <vlan_list>

spanning-tree mst forward-time <Fwdtime : 4-30>

spanning-tree mst max-age <Maxage : 6-40> [forward-time <Fwdtime : 4-30>]

spanning-tree mst max-hops <Maxhops : 6-40>

spanning-tree mst name <Name : word32> revision <0-65535>

Parameter

<Instance : 0-7>	instance 0-7 (CIST=0, MST2=1...)
forward-time	Delay between port states
max-age	Max bridge age before timeout
max-hops	MSTP bridge max hop count
name	Name keyword
priority	Priority of the instance
vlan	VLAN keyword
<Prio : 0-61440>	Range in seconds
<vlan_list>	Range of VLANs
<Fwdtime : 4-30>	Range in seconds
<Maxage : 6-40>	Range in seconds
<Maxhops : 6-40>	Hop count range

<Name : word32>	Name of the bridge
revision	Revision keyword
<0-65535>	Revision number

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree mst 7 vlan 10
SM16TAT2DPA(config)#
```

recovery

The error recovery timeouts.

SYNTAX

spanning-tree recovery interval <Interval : 30-86400>

Parameter

interval	The interval
<Interval : 30-86400>	Range in seconds

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree recovery interval 50
SM16TAT2DPA(config)#
```

transmit

BPDUs to transmit.

SYNTAX

spanning-tree transmit hold-count <Holdcount : 1-10>

Parameter

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

EXAMPLE

```
SM16TAT2DPA(config)# spanning-tree transmit hold-count 5
SM16TAT2DPA(config)#
```

4 COPY Commands

Copy from source to destination.

SYNTAX

copy { startup-config | running-config | < flash:filename | tftp://server/path-and-filename > } { startup-config | running-config | < flash:filename | tftp://server/path-and-filename > } [syntax-check][| { begin | exclude | include }{ <LINE >}]

Parameter

flash:filename | tftp://server/path-and-filename	File in FLASH or on TFTP server
running-config	Currently running configuration
startup-config	Startup configuration
|	Output modifiers
syntax-check	Perform syntax check on source configuration
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# copy startup-config  running-config syntax-check | include #
SM16TAT2DPA#
```

5 DEBUG Commands

Debugging functions.

SYNTAX

debug prompt text

Parameter

prompt Set prompt for testing.

WORD Word for prompt in 32 characters.

EXAMPLE

```
SM16TAT2DPA# debug prompt test#
test## no debug ?
   prompt    Clear prompt for testing
test## no debug prompt ?
   <cr>
test## no debug prompt
SM16TAT2DPA#
```

6 DELETE Commands

Delete one file in flash: file system.

SYNTAX

Delete <Path : word>

Parameter

<Path : word> Name of file to delete.

EXAMPLE

```
SM16TAT2DPA# delete text
SM16TAT2DPA#
```

7 DIR Commands

Directory of all files in flash: file system.

SYNTAX

Dir [| begin | exclude | include <LINE>]

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# dir
Directory of flash:
    r- 2011-01-01 00:00:00     720 default-config
    rw 2011-01-01 00:00:11    1777 startup-config
2 files, 2497 bytes total.
```

8 DISABLE Commands

Turn off privileged commands.

SYNTAX

disable <0-15>

Parameter

<0-15>	Privilege level

EXAMPLE

```
SM16TAT2DPA# disable 10
SM16TAT2DPA#
```

9 DO Commands

To run exec commands in config mode.

SYNTAX

Do <LINE>{[LINE]}

Parameter

LINE Exec Command

EXAMPLE

```
SM16TAT2DPA# do show clock
System Time     : 2011-01-01T00:03:44+00:00
```

10 DOT1X Commands

IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x initialize [interface (<port_type> [<plist>])]

Parameter

initialize	Force re-authentication immediately
interface	Interface
*****	All switches or All ports
Gigabitethernet	1 GigabitEthernet port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# dot1x initialize interface GigabitEthernet
1/1-18
```

11 ENABLE Commands

Turn on privileged commands.

Syntax

Enable <1-15>

Parameter

<0-15> Choose privileged level

EXAMPLE

```
SM16TAT2DPA# enable 10
SM16TAT2DPA#
```

12 FIRMWARE Commands

Firmware upgrade/swap

Syntax

firmware swap

firmware upgrade < TFTPServer_path_file **:** word>

Parameter

swap	Swap between Active and Alternate firmware image.
upgrade	Firmware upgrade
<TFTPServer_path_file : word>	TFTP Server IP address, path and file name for the server containing the new image.

EXAMPLE

```
SM16TAT2DPA# firmware upgrade tftp://192.168.1.1/path/GEL2706
Programming image...
SM16TAT2DPA#
```

13 NO Commands

Negate a command or set its defaults

Syntax

no debug prompt

Parameter

debug	Debugging functions
prompt	Clear prompt for testing

EXAMPLE

```
SM16TAT2DPA# no debug prompt
SM16TAT2DPA#
```

14 PING Commands

Send ICMP echo messages

Syntax

ping ip <word1-255> [repeat <Count : 1-60>] [size <Size : 2-1452>] [interval <Seconds : 0-30>]

ping ipv6 <ipv6_addr> [repeat <Count : 1-60>] [size <Size : 2-1452>] [interval <Seconds : 0-30>] [interface vlan <vlan_id>]

Parameter

ip	IP (ICMP) echo
<word1-255>	ICMP destination address
repeat	Specify repeat count
<Count : 1-60>	1-60; Default is 5
size	Specify datagram size
<Size : 2-1452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
interval	Specify repeat interval
<Seconds : 0-30>	0-30; Default is 0
ipv6	IPv6 (ICMPv6) echo
<ipv6_addr>	ICMPv6 destination address
repeat	Specify repeat count
<1-60>	1-60; Default is 5
size	Specify datagram size
<2-1452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
interval	Specify repeat interval
<0-30>	0-30; Default is 0
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID

EXAMPLE

```
SM16TAT2DPA# ping ip 33 interval 22 repeat 33 size 444
PING server 0.0.0.33, 444 bytes of dataitialize interfac
```

15 RELOAD Commands

Reload system.

Syntax

reload { { { cold | warm } [sid <usid>] } | { defaults [keep-ip] } }

Parameter

cold	Reload cold, i.e. reboot.
defaults	Reload defaults without rebooting.
keep-ip	Attepmt to keep VLAN1 IP setup.

EXAMPLE

```
SM16TAT2DPA# reload defaults
% Reloading defaults. Please stand by.
SM16TAT2DPA# reload cold
% Cold reload in progress, please stand by.
SM16TAT2DPA# +M25PXX : Init device with JEDEC ID 0x20BA19.
Luton26 board detected (VSC7427 Rev. D).
RedBoot(tm) bootstrap and debug environment [ROMRAM]
Non-certified release, version 1_15a-Vitesse - built 18:36:46, Sep  9 2014
Copyright (C) 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009
Free Software Foundation, Inc.
RedBoot is free software, covered by the eCos license, derived from the GNU General Public License.
You are welcome to change it and/or distribute copies of it under certain conditions. Under the
license terms, RedBoot's source code and full license terms must have been made available to you.
Redboot comes with ABSOLUTELY NO WARRANTY.
Platform: VCore-III (MIPS32 24KEc) LUTON26
RAM: 0x80000000-0x88000000 [0x80021f70-0x87fe1000 available]
FLASH: 0x40000000-0x41ffffff, 512 x 0x10000 blocks
== Executing boot script in 1.000 seconds - enter ^C to abort
RedBoot> fis load -d managed
Image loaded from 0x80040000-0x80bf3d80
RedBoot> go
```

16 SEND Commands

Send a message to other tty lines

Syntax

send { * | <session_list> | console 0 | vty <vty_list> } <message>

Parameter

*****	All tty lines
<0~16>	Send a message to multiple lines
console	Primary terminal line
0	Send a message to a specific line
vty	Virtual terminal
<0~15>	Send a message to multiple lines
<LINE>	Message to be sent to lines, in 128 characters

EXAMPLE

```
SM16TAT2DPA# send * yes,i do
Enter TEXT message.  End with the character 'y'.

y

----------------------------------------
*** Message from line 0:
yes,i do



----------------------------------------
SM16TAT2DPA#
```

17 SHOW Commands

Show running system information

Table : SHOW Commands

Command	Function
aaa	Login methods
access	Access management
access-list	Access list
aggregation	Aggregation port configuration
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
green-ethernet	Green ethernet (Power reduction)
history	Display the session command history
interface	Interface status and configuration
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP configuration/status
line	TTY line information
lldp	Display LLDP neighbors information.
logging	Syslog
loop-protect	Loop protection configuration
mac	Mac Address Table information
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP
platform	platform specific information
poe	Power over ethernet
port-security	
privilege	Display command privilege
pvlan	PVLAN status
qos	Quality of Service
radius-server	RADIUS configuration

rmon	RMON statistics
running-config	Show running system information
sflow	Statistics flow.
snmp	Display SNMP configurations
spanning-tree	STP Bridge
switchport	Display switching mode characteristics
System	show system information
tacacs-server	TACACS+ configuration
terminal	Display terminal configuration parameters
upnp	Display UPnP configurations
users	Display information about terminal lines
version	System hardware and software status
vlan	VLAN status
voice	Voice appliance attributes
web	Web

aaa

Login methods.

SYNTAX

show aaa [| {begin | exclude | include } <LINE>]

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show aaa
console : local
telnet  : local
ssh     : local
http    : local
SM16TAT2DPA#
```

access

Access management.

SYNTAX

show access management [statistics | <access_id_list>]

Parameter

management	Access management configuration
statistics	Statistics data
<AccessidList : 1~16>	ID of access management entry
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show access management
Switch access management mode is disabled

W: WEB/HTTPS
S: SNMP
T: TELNET/SSH

Idx VID  Start IP Address              End IP Address               W S T
--- ---  ------------------------------ ------------------------------
- - -
SM16TAT2DPA# show access management statistics

Access Management Statistics:
-----------------------------
HTTP     Receive:         0    Allow:         0    Discard:         0
HTTPS    Receive:         0    Allow:         0    Discard:         0
SNMP     Receive:         0    Allow:         0    Discard:         0
TELNET   Receive:         0    Allow:         0    Discard:         0
SSH      Receive:         0    Allow:         0    Discard:         0
SM16TAT2DPA#
```

access-list

Access list

SYNTAX

show access-list [interface [* | Gigabitetherne <PORT_LIST>]] [rate-limiter [<RateLimiterList : 1~16>]] [ace statistics [<AceId : 1~256>]]

show access-list ace-status [static] [loop-protect] [dhcp] [upnp] [arp-inspection] [mep] [ipmc] [ip-source-guard] [ip-mgmt] [conflicts]

Parameter

interface	Select an interface to configure
*****	All Switches or All Ports
Gigbitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18
rate-limiter	Rate limiter
< RateLimiterList : 1~16>	Rate limiter ID
ace	Access list entry
statistics	Traffic statistics
<AceId : 1~256>	ACE ID
ace-status	The local ACEs status
static	The ACEs that are configured by users manually
loop-protect	The ACEs that are configured by Loop Protect module
dhcp	The ACEs that are configured by DHCP module
upnp	The ACEs that are configured by UPnP module
arp-inspection	The ACEs that are configured by ARP Inspection module
mep	The ACEs that are configured by MEP module
ipmc	The ACEs that are configured by IPMC module
ip-source-guard	The ACEs that are configured by IP Source Guard module
ip-mgmt	The ACEs that are configured by IP Mamagement module
conflicts	The conflicts ACEs that does not applied to the hardware due to hardware limitations
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show access-list ace statistics rate-limiter

Switch access-list ace number: 0

Switch access-list rate limiter ID 1 is 1 pps
Switch access-list rate limiter ID 2 is 1 pps
Switch access-list rate limiter ID 3 is 1 pps
Switch access-list rate limiter ID 4 is 1 pps
Switch access-list rate limiter ID 5 is 1 pps
Switch access-list rate limiter ID 6 is 1 pps
Switch access-list rate limiter ID 7 is 1 pps
Switch access-list rate limiter ID 8 is 1 pps
Switch access-list rate limiter ID 9 is 1 pps
Switch access-list rate limiter ID 10 is 1 pps
Switch access-list rate limiter ID 11 is 1 pps
Switch access-list rate limiter ID 12 is 1 pps
Switch access-list rate limiter ID 13 is 1 pps
Switch access-list rate limiter ID 14 is 1 pps
Switch access-list rate limiter ID 15 is 1 pps
Switch access-list rate limiter ID 16 is 1 pps
SM16TAT2DPA#
```

aggregation

Aggregation port configuration.

SYNTAX

show aggregation [mode] [| {begin | exclude | include } <LINE>]

Parameter

mode	Traffic distribution mode
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show aggregation  Mode
Aggregation Mode:

SMAC  : Enabled
DMAC  : Disabled
IP    : Enabled
Port  : Enabled
SM16TAT2DPA#
```

clock

Configure time-of-day clock.

SYNTAX

show clock [detail]

Parameter

detail Display detailed information

EXAMPLE

```
SM16TAT2DPA# show clock detail
System Time    : 2011-01-01T00:53:57+00:00

Timezone : Timezone Offset : 0 ( 0 minutes)
Timezone Acronym :

Daylight Saving Time Mode : Disabled.
Daylight Saving Time Start Time Settings :
       Week: 0
       Day: 0
       Month: 0
       Date: 0
       Year: 0
       Hour: 0
       Minute: 0
Daylight Saving Time End Time Settings :
       Week: 0
       Day: 0
       Month: 0
       Date: 0
       Year: 0
       Hour: 0
       Minute: 0
Daylight Saving Time Offset : 1 (minutes)
```

dot1x

IEEE Standard for port-based Network Access Control.

SYNTAX

show dot1x statistics { eapol | radius | all } [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>]

show dot1x status [interface (<port_type> [<port_type_list>])] [brief] [| {begin | exclude | include } <LINE>]

Parameter

statistics	Shows statistics for either eapol or radius.
all	Show all dot1x statistics
eapol	Show EAPOL statistics
radius	Show Backend Server statistics
<port_type >	GigabitEthernet
<port_type_list>	Port list in 1/1-18 for Gigabotethernet
Status	Shows dot1x status, such as admin state, port state and last source.
brief	Show status in a brief format
interface	Interface
*****	All Switches or All Ports
Gigbitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# show dot1x statistics radius
                   Rx Access   Rx Other    Rx Auth.    Rx Auth.    Tx         MAC
Interface          Challenges  Requests    Successes   Failures    Responses   Address
--------------------  ----------  ----------  ----------  ----------  ----------  --
GigabitEthernet 1/1    0          0          0          0          0          -
GigabitEthernet 1/2    0          0          0          0          0          -
GigabitEthernet 1/3    0          0          0          0          0          -
GigabitEthernet 1/4    0          0          0          0          0          -
GigabitEthernet 1/5    0          0          0          0          0          -
SM16TAT2DPA#
```

green-ethernet

Green ethernet (Power reduction).

SYNTAX

show green-ethernet [interface <port_type> <port_type_list>]

show green-ethernet eee [interface <port_type> <port_type_list>]

show green-ethernet energy-detect [interface <port_type> <port_type_list>]

show green-ethernet short-reach [interface <port_type> <port_type_list>]

Parameter

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.
interface	Shows green ethernet status for a specific port or ports.
short-reach	Shows green ethernet short-reach status for a specific
interface	
*	All Switches or All ports
<port_type >	GigabitEthernet or
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# show green-ethernet eee
Interface            Lnk  EEE Capable  EEE Enabled  LP EEE Capable   In
Power Save
----------------------  ---  -----------  -----------  ---------------
-------------
GigabitEthernet 1/1    No   Yes         No          No             No
GigabitEthernet 1/2    No   Yes         No          No             No
GigabitEthernet 1/3    No   Yes         No          No             No
GigabitEthernet 1/4    No   Yes         No          No             No
GigabitEthernet 1/5    No   Yes         No          No             No
GigabitEthernet 1/6    No   Yes         No          No             No
GigabitEthernet 1/7    No   Yes         No          No             No
GigabitEthernet 1/8    No   Yes         No          No             No
GigabitEthernet 1/9    No   Yes         No          No             No
```

history

Display the session command history.

SYNTAX

show history [| {begin | exclude | include } <LINE>]

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show history
  show evc statistics
  show green-ethernet EEE
  show green-ethernet EEE interface GigabitEthernet
  show history
SM16TAT2DPA#
```

interface

Interface status and configuration.

SYNTAX

show interface <port_type> <port_type_list> [switchport [access | trunk | hybrid]]

show interface <port_type> <port_type_list> capabilities

show interface <port_type> <port_type_list> statistics [{ packets | bytes | errors | discards | filtered | { priority [<0~7>] } }] [{ up | down }]

show interface <port_type> <port_type_list> status

show interface <port_type> <port_type_list> veriphy

show interface vlan [<vlan_list>]

Parameter

<port_type>	Gigabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabitethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
capabilities	Display capabilities.
statistics	Display statistics counters.
status	Display status.
switchport	Show interface switchport information
veriphy	Run cable diagnostics and show result.
bytes	Show byte statistics.
discards	Show discard statistics.
down	Show ports which are down
errors	Show error statistics.
filtered	Show filtered statistics.
packets	Show packet statistics.
priority	Queue number
up	Show ports which are up
vlan	VLAN status
<vlan_list>	VLAN list

EXAMPLE 1: show interface (copper ports 1-3)

```
SM16TAT2DPA# show interface GigabitEthernet 1/1-3 capabilities


GigabitEthernet 1/1 Capabilities:
Connector Type      : none
Fiber Type          : none
TX Central Wavelength: none
Bit Rate            : none
Vendor OUI          : none
Vendor name         : none
Vendor PN           : none
Vendor revision     : none
Vendor Serial Number : none
Data Code           : none
Temperature         : none
Vcc:                : none
Mon1(Bias)          : none
Mon2(TX PWR)        : none
Mon3(RX PWR)        : none

GigabitEthernet 1/2 Capabilities:
Connector Type      : none
Fiber Type          : none
TX Central Wavelength: none
-- more --, next page: Space, continue: g, quit: ^C
```

EXAMPLE 2: show interface (fiber SFP ports 17-18)

```
SM16TAT2DPA# show interface GigabitEthernet 1/17-18 capabilities


GigabitEthernet 1/17 Capabilities:
Connector Type      : SFP or SFP Plus - LC
Fiber Type          : Reserved
TX Central Wavelength: 850
Bit Rate            : 10 Gbps
Vendor OUI          : 00-c0-f2
Vendor name         : Transition
Vendor PN           : TN-10GSFP-SR
Vendor revision     : 0001
Vendor Serial Number : 102201101
Data Code           : 100527
Temperature         : 26.69 C
Vcc                 : 3.33 V
Mon1(Bias)          : 5 mA
Mon2(TX PWR)        : -2.29 dBm
Mon3(RX PWR)        : none

GigabitEthernet 1/18 Capabilities:
Connector Type      : SFP or SFP Plus - LC
Fiber Type          : Reserved
TX Central Wavelength: 1310
-- more --, next page: Space, continue: g, quit: ^C
```

ip

Internet Protocol.

SYNTAX

show ip arp

show ip arp inspection [interface {<port_type> <port_type_list>} | vlan <vlan_list>]

show ip arp inspection entry [dhcp-snooping | static] [interface <port_type> <port_type_list>]

show ip dhcp relay [statistics]

show ip dhcp snooping [statistics] [interface <port_type> <port_type_list>]

show ip http server secure status

show ip igmp snooping [vlan <vlan_list>] [group-database [interface <port_type> <port_type_list>] [sfm-information]] [detail]

show ip igmp snooping mrouter [detail]

show ip interface brief

show ip name-server

show ip route

show ip source binding [dhcp-snooping | static] [interface <port_type> <port_type_list>]

show ip ssh

show ip statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <0~255>]

show ip verify source [interface <port_type> <port_type_list>]

Parameter

arp	Address Resolution Protocol
inspection	ARP inspection
interface	arp inspection entry interface config
<port_type>	Gigabitethernet
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
vlan	VLAN configuration
<vlan_list>	Select a VLAN id to configure
entry	arp inspection entries
dhcp-snooping	learn from dhcp snooping
static	setting from static entries
dhcp	Dynamic Host Configuration Protocol
relay	DHCP relay agent configuration
statistics	Traffic statistics
snooping	DHCP snooping
http	Hypertext Transfer Protocol

server	HTTP web server
secure	Secure
status	Status
igmp	Internet Group Management Protocol
snooping	Snooping IGMP
vlan	Search by VLAN
<vlan_list>	VLAN identifier(s): VID
group-database	Multicast group database from IGMP
sfm-information	Including source filter multicast information from IGMP
detail	Detail running information/statistics of IGMP snooping
mrouter	Multicast router port status in IGMP
detail	Detail running information/statistics of IGMP snooping
interface	IP interface status and configuration
brief	Brief IP interface status
name-server	Domain Name System
route	Display the current ip routing table
binding	ip source binding
dhcp-snooping	learn from dhcp snooping
ssh	Secure Shell
system	IPv4 system traffic
icmp	IPv4 ICMP traffic
icmp-msg	IPv4 ICMP traffic for designated message type
<0~255>	ICMP message type ranges from 0 to 255
verify	verify command
source	verify source

EXAMPLE

```
SM16TAT2DPA# show ip statistics system

IPv4 statistics:

  Rcvd:  411 total in 36226 bytes
         273 local destination, 0 forwarding
         0 header error, 0 address error, 0 unknown protocol
         0 no route, 0 truncated, 138 discarded
  Sent:  0 total in 0 byte
         0 generated, 0 forwarded
         0 no route, 0 discarded
  Frags: 0 reassemble (0 reassembled, 0 couldn't reassemble)
         0 fragment (0 fragmented, 0 couldn't fragment)
         0 fragment created
  Mcast: 411 received in 36226 bytes
         0 sent in 0 byte
  Bcast: 273 received, 0 sent
SM16TAT2DPA#
```

ipmc

IPv4/I

SYNTAX

show ipmc profile [<ProfileName : word16>] [detail] [| {begin | exclude | include } <LINE>]

show ipmc range [<EntryName : word16>] [| {begin | exclude | include } <LINE>]

Parameter

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
<ProfileName : word16>	Profile name in 16 char's
detail	Detail information of a profile
<EntryName : word16>	Range entry name in 16 char's
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show ipmc range

SM16TAT2DPA#
```

ipv6

IPv6 configuration commands.

SYNTAX

show ipv6 interface [vlan <vlan_list> { brief | statistics }] [| {begin | exclude | include } <LINE>]

show ipv6 mld snooping [vlan <vlan_list>] [group-database [interface <port_type> <port_type_list>] [sfm-information]] [detail]

show ipv6 mld snooping mrouter [detail]

show ipv6 neighbor [interface vlan <vlan_list>]

show ipv6 route [interface vlan <vlan_list>]

show ipv6 statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <Type : 0~255>]

Parameter

interface	Select an interface to configure
vlan	VLAN of IPv6 interface
<vlan_list>	IPv6 interface VLAN list
brief	Brief summary of IPv6 status and configuration
statistics	Traffic statistics
mld	Multicasat Listener Discovery
snooping	Snooping MLD
vlan	Search by VLAN
<vlan_list>	VLAN identifier(s): VID
group-database	Multicast group database from MLD
interface	Search by port
<port_type>	Gigabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
sfm-information	Including source filter multicast information from MLD
detail	Detail running information/statistics of MLD snooping
mrouter	Multicast router port status in MLD
neighbor	IPv6 neighbors
route	IPv6 routes
statistics	Traffic statistics
system	IPv6 system traffic
icmp	IPv6 ICMP traffic
icmp-msg	IPv6 ICMP traffic for designated message type

<Type : 0~255>	ICMP message type ranges from 0 to 255
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show ipv6 statistics system

IPv6 statistics:

  Rcvd:  2 total in 112 bytes
         0 local destination, 0 forwarding
         0 header error, 0 address error, 0 unknown protocol
         0 no route, 0 truncated, 2 discarded
  Sent:  8 total in 512 bytes
         14 generated, 0 forwarded
         3 no route, 0 discarded
  Frags: 0 reassemble (0 reassembled, 0 couldn't reassemble)
         0 fragment (0 fragmented, 0 couldn't fragment)
         0 fragment created
  Mcast: 2 received in 112 bytes
         8 sent in 512 bytes
  Bcast: 0 received, 0 sent
SM16TAT2DPA#
```

lacp

LACP configuration/status.

SYNTAX

show lacp { internal | statistics | system-id | neighbour } [| {begin | exclude | include } <LINE>]

Parameter

internal	Internal LACP configuration
neighbour	Neighbour LACP status
statistics	Internal LACP statistics
system-id	LACP system id
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show lacp internal
Port  Mode     Key   Role    Timeout  Priority
----  --------  ----  ------  -------  --------
1    Disabled  Auto  Active  Fast    32768
2    Disabled  Auto  Active  Fast    32768
3    Disabled  Auto  Active  Fast    32768
4    Disabled  Auto  Active  Fast    32768
5    Disabled  Auto  Active  Fast    32768
6    Disabled  Auto  Active  Fast    32768
7    Disabled  Auto  Active  Fast    32768
SM16TAT2DPA#
```

line

TTY line information.

SYNTAX

show line [alive] [| {begin | exclude | include } <LINE>]

Parameter

alive	Display information about alive lines
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show line alive
Line is con 0.
   * You are at this line now.
   Alive from Console.
   Default privileged level is 2.
   Command line editing is enabled
   Display EXEC banner is enabled.
   Display Day banner is enabled.
   Terminal width is 80.
        length is 24.
           history size is 32.
   Current session privilege is 15.
   Elapsed time is 0 day 0 hour 26 min 52 sec.
   Idle time is 0 day 0 hour 0 min 0 sec.

SM16TAT2DPA#
```

lldp

Display LLDP neighbors information.

SYNTAX

show lldp med media-vlan-policy [<0~31>] [| {begin | exclude | include } <LINE>]

show lldp med remote-device [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>]

show lldp neighbors [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>]

show lldp statistics [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>]

Parameter

med	Display LLDP-MED neighbors information.
neighbors	Display LLDP neighbors information.
statistics	Display LLDP statistics information.
media-vlan-policy	Display media vlan policies.
remote-device	Display remote device LLDP-MED neighbors information.
<0~31>	List of policies.
Interface	
<port_type >	GigabitEthernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show lldp med media-vlan-policy
No policies defined
SM16TAT2DPA#
```

logging

Syslog.

SYNTAX

show logging <loggin_id : 1-4294967295> [| {begin | exclude | include } <LINE>]

show logging [info] [warning] [error] [| {begin | exclude | include } <LINE>]

Parameter

<logging_id: 1-4294967295>	Logging ID
error	Error
info	Information
warning	Warning
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show logging info
Switch logging host mode is disabled
Switch logging host address is null
Switch logging level is information

Number of entries:
Info   : 3
Warning: 158
Error  : 0
All    : 161

ID    Level   Time                     Message
----  ------  -----------------------  ----------------------------
   1  Info    1970-01-01T00:00:00+00:00  Switch just made a cold boot.
   2  Info    1970-01-01T00:00:03+00:00  Link up on port 1
 161  Info    1970-01-01T02:25:55+00:00  Link down on port 1
SM16TAT2DPA#
```

loop-protect

Loop protection configuration.

SYNTAX

show loop-protect [interface <port_type> <port_type_list>]

Parameter

interface	Interface status and configuration
<port_type >	GigabitEthernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# show loop-protect

Loop Protection Configuration
======================================
Loop Protection   : Enable
Transmission Time : 1 sec
Shutdown Time     : 180 sec

GigabitEthernet 1/1
------------------------------
   Loop protect mode is enabled.
   Actions are both of shutdown and log.
   No loop.
   The number of loops is 0.
   Status is down.

GigabitEthernet 1/2
------------------------------
   Loop protect mode is enabled.
-- more --, next page: Space, continue: g, quit: ^C    No loop.
```

mac

Mac Address Table information.

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>] [| {begin | exclude | include } <LINE>]

Parameter

address-table	Mac Address Table
conf	User added static mac addresses
static	All static mac addresses
aging-time	Aging time
learning	Learn/disable/secure state
count	Total number of mac addresses
interface	Select an interface to configure
<port_type>	Gigabitethernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18
address	MAC address lookup
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN lookup
<vlan_id>	VLAN IDs 1-4095
vlan	Addresses in this VLAN
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
<port_type>	igabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show mac address-table static
SM16TAT2DPA#
```

mvr

Multicast VLAN Registration configuration.

SYNTAX

show mvr [vlan <vlan_list> | name <word16>] [group-database [interface <port_type> <port_type_list>] [sfm-information]] [detail] [| {begin | exclude | include } <LINE>]

Parameter

vlan	Search by VLAN
<vlan_list>	MVR multicast VLAN list
name	Search by MVR name
<word16>	MVR multicast VLAN name
group-database	Multicast group database from MVR
interface	Search by port
<port_type>	* or Gigabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
sfm-information	Including source filter multicast information from MVR
detail	Detail information/statistics of MVR group database
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show mvr vlan 10 detail

MVR is currently disabled, please enable MVR to start group registration.
% Invalid MVR IGMP VLAN 10.

% Invalid MVR MLD VLAN 10.

SM16TAT2DPA#
```

platform

Platform specific information

SYNTAX

show platform phy [interface (<port_type> [<v_port_type_list>])] [| {begin | exclude | include } <LINE>]

show platform phy id [interface (<port_type> [<v_port_type_list>])] [| {begin | exclude | include } <LINE>]

show platform phy instance [| {begin | exclude | include } <LINE>]

show platform phy status [interface (<port_type> [<v_port_type_list>])] [| {begin | exclude | include } <LINE>]

Parameter

phy	PHYs' information
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show platform phy
Port   API Inst   WAN/LAN/1G Mode      Duplex    Speed     Link
----   ---------  ---------  ----      ------    -----     ----
1      Default    1G         PD        -         -         ,No
2      Default    1G         PD        -         -         ,No
3      Default    1G         PD        -         -         ,No
4      Default    1G         PD        -         -         ,Yes
5      Default    1G         PD        -         -         ,No
6      Default    1G         PD        -         -         ,No
7      Default    1G         PD        -         -         ,No
8      Default    1G         PD        -         -         ,No
9      Default    1G         PD        -         -         ,No
10     Default    1G         PD        -         -         ,No
11     Default    1G         PD        -         -         ,No
12     Default    1G         PD        -         -         ,No
```

poe

show poe

SYNTAX

show poe auto-check [interface (<port_type> [<v_port_type_list>])]

show poe config [interface (<port_type> [<v_port_type_list>])]

show poe power-delay [interface (<port_type> [<v_port_type_list>])]

show poe schedule [interface (<port_type> [<v_port_type_list>])]

show poe status [interface (<port_type> [<v_port_type_list>])]

Parameter

interface

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show poe status interface GigabitEthernet 1/1-2
Interface            PD Class  Port Status                        Pwr
Req Pwr Alloc Power   Current  Priority
                                                                Used
[W] Used[W]   Used[W] Used[mA]
---------------------- ---------
----------------------------------------
GigabitEthernet 1/1    -        PoE turned OFF - PoE disabled          30
0        0.0    0       Low
GigabitEthernet 1/2    -        PoE turned OFF - PoE disabled          30
0        0.0    0       Low



Total Power Request :   60.0 [W]
Total Power Alloctaed : 0.0 [W]
Total Power Used :     0.0 [W]
Total Current Used :   0 [mA]
SM16TAT2DPA#
```

ntp

show NTP.

SYNTAX

show ntp status

Parameter

status status

EXAMPLE

```
SM16TAT2DPA# show ntp status
NTP Mode : disabled
Idx   Server IP host address (a.b.c.d) or a host name string
---   ------------------------------------------------
1
2
3
4
5
SM16TAT2DPA#
```

port-security

SYNTAX

show port-security port [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>

show port-security switch [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>

Parameter

port	Show MAC Addresses learned by Port Security
switch	Show Port Security status.
Interface	
<port_type >	GigabitEthernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show port-security port interface GigabitEthernet 1/2

GigabitEthernet 1/2

-------------------

MAC Address       VID   State      Added              Age/Hold Time

-----------------  ----  ----------  --------------------  -------------

<none>


SM16TAT2DPA#
```

privilege

SYNTAX

show privilege [| {begin | exclude | include } <LINE>

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match

EXAMPLE

```
SM16TAT2DPA# show privilege


 ------------------------------------------
|   The order is as the input sequence and   |
|   the last one has the highest priority.   |
 ------------------------------------------


  privilege line level 5 LINE
```

pvlan

PVLAN status.

SYNTAX

show pvlan<range_list>

show pvlan isolation interface <port_type> <port_type_list>

Parameter

<range_list>	PVLAN id to show configuration for
isolation	show isolation configuration
<port_type >	GigabitEthernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show pvlan isolation interface GigabitEthernet 1/1-2
Port                          Isolation
-------------------------------  ---------
GigabitEthernet 1/1             Disabled
GigabitEthernet 1/2             Disabled
SM16TAT2DPA#
```

qos

Quality of Service.

SYNTAX

show qos [{ interface [<port_type> <port_type_list>] } | wred | { maps [dscp-cos] [dscp-ingress-translation] [dscp-classify] [cos-dscp] [dscp-egress-translation] } | storm | { qce [<Qce : 1-256>] }] [| {begin | exclude | include } <LINE>

Parameter

interface	Interface
<port_type >	GigabitEthernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
maps	Global QoS Maps/Tables
qce	QoS Control Entry
storm	Storm policer
wred	Weighted Random Early Discard
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
<Qce : 1-256>	QCE ID
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show qos storm
qos storm:
==========
Unicast  : disabled          1
Multicast: disabled          1
Broadcast: disabled          1
SM16TAT2DPA#
```

radius-server

RADIUS configuration.

SYNTAX

show radius-server [statistics] [| {begin | exclude | include } <LINE>

Parameter

statistics	RADIUS statistics
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show radius-server
Global RADIUS Server Timeout     : 5 seconds
Global RADIUS Server Retransmit   : 3 times
Global RADIUS Server Deadtime    : 0 minutes
Global RADIUS Server Key        :
Global RADIUS Server Attribute 4  :
Global RADIUS Server Attribute 95 :
Global RADIUS Server Attribute 32 :
No hosts configured!
SM16TAT2DPA#
```

rmon

RMON statistics.

SYNTAX

show rmon alarm [<1~65535>] [| {begin | exclude | include } <LINE>

show rmon event [<1~65535>] [| {begin | exclude | include } <LINE>

show rmon history [<1~65535>] [| {begin | exclude | include } <LINE>

show rmon statistics [<1~65535>] [| {begin | exclude | include } <LINE>

Parameter

alarm	Display the RMON alarm table
event	Display the RMON event table
history	Display the RMON history table
statistics	Display the RMON statistics table
<1~65535>	Alarm/Event/History/Statistics entry list
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show rmon alarm
SM16TAT2DPA#
```

running-config

Show running system information.

SYNTAX

show running-config [all-defaults] [| {begin | exclude | include } <LINE>

show running-config feature <CWORD> [all-defaults] [| {begin | exclude | include } <LINE>

show running-config interface <port_type> <port_type_list> [all-defaults] [| {begin | exclude | include } <LINE>

show running-config interface vlan <vlan_list> [all-defaults] [| {begin | exclude | include } <LINE>

show running-config line { console | vty } <range_list> [all-defaults] [| {begin | exclude | include } <LINE>

show running-config vlan <vlan_list> [all-defaults] [| {begin | exclude | include } <LINE>

Parameter

all-defaults	Include most/all default values
feature	Show configuration for specific feature
interface	Show specific interface(s)
line	Show line settings
vlan	VLAN
CWORD	Valid words are 'GVRP' 'access' 'access-list' 'aggregation' 'arp-inspection' 'auth' 'clock' 'dhcp' 'dhcp-snooping' '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' 'mep' 'monitor' 'mstp' 'mvr' 'mvr-port' 'ntp' 'phy' 'poe' 'port' 'port-security' 'pvlan' 'qos' 'rmon' 'sflow' 'snmp' 'source-guard' 'ssh' 'system' 'upnp' 'user' 'vlan' 'voice-vlan' 'web-privilege-group-level'
<port_type >	GigabitEthernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
<vlan_list>	List of VLAN numbers
console	Console
vty	VTY
<range_list>	List of console/VTYs
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show running-config interface vlan 3
Building configuration...
end
SM16TAT2DPA#
```

sflow

Statistics flow..

SYNTAX

show sflow [statistics { receiver | samplers [[<range_list>] <port_type> <port_type_list>] }] [| {begin | exclude | include } <LINE>

Parameter

statistics	sFlow statistics.
receiver	Show statistics for receiver.
samplers	Show statistics for samplers.
<range_list>	runtime, see sflow_icli_functions.c
<port_type >	GigabitEthernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show sflow

Agent Configuration:
====================

Agent Address: 127.0.0.1

Receiver Configuration:
=======================

Owner       : <none>
Receiver    : 0.0.0.0
UDP Port    : 6343
Max. Datagram: 1400 bytes
Time left   : 0 seconds

No enabled collectors (receivers). Skipping displaying per-port info.
SM16TAT2DPA#
```

snmp

Display SNMP configurations.

SYNTAX

show snmp

show snmp access [<GroupName : word32> { v1 | v2c | v3 | any } { auth | noauth | priv }] [| {begin | exclude | include } <LINE>

show snmp community v3 [<Community : word127>] [| {begin | exclude | include } <LINE>

show snmp host [<ConfName : word32>] [system] [switch] [interface] [aaa] [| {begin | exclude | include } <LINE>

show snmp security-to-group [{ v1 | v2c | v3 } <SecurityName : word32>] [| {begin | exclude | include } <LINE>

show snmp user [<UserName : word32> <EngineId : word10-32>] [| {begin | exclude | include } <LINE>

show snmp view [<ViewName : word32> <OidSubtree : word255>] [| {begin | exclude | include } <LINE>

Parameter

access	access configuration
<GroupName : word32>	Group name
v1	v1 security model
v2c	v2c security model
v3	v3 security model
any	any security model
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
community	Community
v3	SNMPv3
<Community : word127>	Specify community name
host	Set SNMP host's configurations
<ConfName : word32>	Name of the host configuration
system	System event group
switch	Switch event group
interface	Interface event group
aaa	AAA event group
security-to-group	security-to-group configuration
<SecurityName : word32>	security group name
user	User
<UserName : word32>	Security user name

<EngineId : word10-32>	Security Engine ID
view	MIB view configuration
<ViewName : word32>	MIB view name
<OidSubtree : word255>	MIB view OID
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show snmp
SNMP Configuration
SNMP Mode                  : enabled
SNMP Version               : 2c
Read Community             : public
Write Community            : private
Trap Mode                  : disabled
Trap Version               : 1

SNMPv3 Communities Table:
Community   : public
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0

Community   : private
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0



SNMPv3 Users Table:
User Name            : default_user
Engine ID            : 800007e5017f000001
-- more --, next page: Space, continue: g, quit: ^C
```

spanning-tree

STP Bridge.

SYNTAX

show spanning-tree [summary | active | { interface <port_type> <port_type_list> } | { detailed [interface <port_type> <port_type_list>] } | { mst [configuration | { <0-7> [interface <port_type> <port_type_list>] }] }] [| {begin | exclude | include } <LINE>

Parameter

summary	STP summary
active	STP active interfaces
interface	Choose port
<port_type>	Gigabitethernet
*****	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
detailed	STP statistics
interface	List of port type and port ID, ex, 1/1-18
mst	Configuration
configuration	STP bridge instance no (0-7, CIST=0, MST2=1...)
<0-7>	Choose port
<port_type >	GigabitEthernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show snmp
SNMP Configuration
SNMP Mode                  : enabled
SNMP Version               : 2c
Read Community             : public
Write Community            : private
Trap Mode                  : disabled
Trap Version               : 1
SNMPv3 Communities Table:
Community   : public
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0

Community   : private
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0
SNMPv3 Users Table:
User Name            : default_user
Engine ID            : 800007e5017f000001
SM16TAT2DPA# show spanning-tree ?
   |          Output modifiers
   active      STP active interfaces
   detailed    STP statistics
   interface   Choose port
   mst         Configuration
   summary     STP summary
   <cr>
SM16TAT2DPA# show spanning-tree
CIST Bridge STP Status
Bridge ID    : 32768.00-40-C7-01-02-03
Root ID     : 32768.00-40-C7-01-02-03
Root Port    : -
Root PathCost: 0
Regional Root: 32768.00-40-C7-01-02-03
Int. PathCost: 0
Max Hops     : 20
```

switchport

Display switching mode characteristics.

SYNTAX

show switchport forbidden [{ vlan <vlan_id> } | { name <word> }] [| {begin | exclude | include } <LINE>

Parameter

forbidden	Lookup VLAN Forbidden port entry.
name	name - Show forbidden access for specific VLAN name.
vlan	vid - Show forbidden access for specific VLAN id.
<vlan_id>	VLAN id
<word>	VLAN name
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show switchport forbidden
Forbidden VLAN table is empty
SM16TAT2DPA#
```

tacacs-server

TACACS+ configuration.

SYNTAX

show tacacs-server [| {begin | exclude | include } <LINE>

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show tacacs-server
Global TACACS+ Server Timeout     : 5 seconds
Global TACACS+ Server Deadtime    : 0 minutes
Global TACACS+ Server Key         :
No hosts configured!
SM16TAT2DPA#
```

system

Show system information.

SYNTAX

show system

Parameter

None

EXAMPLE

```
SM16TAT2DPA# show system
Model Name               :
System Description        :
Location                 :
Contact                  :
Platform Name             :
System Date              : 2011-01-01T01:41:34 00:00
System Uptime             : 01:41:34
Bootloader Version        : v1.15a
Firmware Version          : v6.46 2016-04-03
Hardware Version          : v1.02
Mechanical Version        :
Serial Number             : XXXXYYZZZZZZ
MAC Address              : 00-40-c7-01-02-03
Memory                   : Total=84677 KBytes, Free=63281 KBytes,
Max=63281 KBytes
FLASH                    : 0x40000000-0x41ffffff, 512 x 0x10000 blocks
SM16TAT2DPA#
```

terminal

Display terminal configuration parameters.

SYNTAX

show terminal [| {begin | exclude | include } <LINE>

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show terminal
Line is con 0.
    * You are at this line now.
    Alive from Console.
    Default privileged level is 2.
    Command line editing is enabled
    Display EXEC banner is enabled.
    Display Day banner is enabled.
    Terminal width is 80.
            length is 24.
            history size is 32.
            exec-timeout is 10 min 0 second.

    Current session privilege is 15.
    Elapsed time is 0 day 0 hour 29 min 24 sec.
    Idle time is 0 day 0 hour 0 min 0 sec.

SM16TAT2DPA#
```

upnp

Display UPnP configurations.

SYNTAX

show upnp [| {begin | exclude | include } <LINE>

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show upnp
UPnP Mode               : Disabled
UPnP TTL                : 4
UPnP Advertising Duration : 100
SM16TAT2DPA#
```

users

Display information about terminal lines.

SYNTAX

show users myself [| {begin | exclude | include } <LINE>

Parameter

myself	Display information about mine
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show user myself
Line is vty 0.
   * You are at this line now.
   Connection is from 192.168.10.119:4123 by Telnet.
   User name is admin.
   Privilege is 15.
   Elapsed time is 0 day 1 hour 33 min 27 sec.
   Idle time is 0 day 0 hour 0 min 0 sec.
```

version

Show system hardware and software status.

SYNTAX

show version [| {begin | exclude | include } <LINE>

Parameter

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show ver

MEMORY          : Total=82171 KBytes, Free=63554 KBytes, Max=62897 KBytes
FLASH           : 0x40000000-0x41ffffff, 512 x 0x10000 blocks
MAC Address     : 00-40-c7-1c-b6-46
Previous Restart : Cold

System Contact   :
System Name      : SM16TAT2DPA
System Location  :
System Time      : 2011-01-01T22:11:09+00:00
System Uptime    : 22:11:09

Active Image
------------
Image           : managed
Version         : SM16TAT2DPA (standalone) v6.41.1652
Date            : 2015-12-03T21:20:09+08:00

Alternate Image
---------------
Image           : managed.bk
Version         : SM16TAT2DPA (standalone) v6.40.1605
Date            : 2015-11-12T20:51:41+08:00

SM16TAT2DPA#
```

vlan

VLAN status.

SYNTAX

show vlan [id <vlan_list> | name <vword32> | brief]

show vlan protocol [eth2 { <0x600-0xffff> | arp | ip | ipx | at }] [snap { <0x0-0xffffff> | rfc_1042 | snap_8021h } <0x0-0xffff>] [llc <0x0-0xff> <0x0-0xff>]

show vlan status [admin [interface] | all | combined | conflicts | gvrp | interface | mstp | mvr | nas | vcl | voice-vlan] [<port_type ><port_type_list>]

Parameter

id	VLAN status by VLAN id
<vlan_list>	VLAN IDs 1-4095
name	VLAN status by VLAN name
<vword32>	A VLAN name
brief	VLAN summary information
protocol	Protocol-based VLAN status
eth2	Ethernet protocol based VLAN status
<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
snap	SNAP-based VLAN status
<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)
llc	LLC-based VLAN status
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
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.
interface	Show the VLANs configured for a specific interface(s).
<port_type >	GigabitEthernet
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet

EXAMPLE

```
SM16TAT2DPA# show vlan

VLAN  Name                            Interfaces

----  --------------------------------  ----------

1     default                         Gi 1/1-18


SM16TAT2DPA#
```

voice

Voice appliance attributes.

SYNTAX

show voice vlan [oui <oui> | interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>

Parameter

vlan	Vlan for voice traffic
oui	OUI configuration
<oui>	OUI value
interface	Select an interface to configure
<port_type>	* or Gigabitethernet
*****	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-18 for Gigabitethernet
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show voice vlan
Switch voice vlan is disabled
Switch voice vlan ID is 1000
Switch voice vlan aging-time is 86400 seconds
Switch voice vlan traffic class is 7

Telephony OUI  Description
-------------  -----------
00-01-E3       Siemens AG phones
00-03-6B       Cisco phones
00-0F-E2       H3C phones
00-60-B9       Philips and NEC AG phones
00-D0-1E       Pingtel phones
00-E0-75       Polycom phones
00-E0-BB       3Com phones

Voice VLAN switchport is configured on following:
```

```
GigabitEthernet 1/1 :
---------------------
GigabitEthernet 1/1 switchport voice vlan mode is disabled
GigabitEthernet 1/1 switchport voice security is disabled
GigabitEthernet 1/1 switchport voice discovery protocol is oui
-- more --, next page: Space, continue: g, quit: ^C
```

web

web.

SYNTAX

show web privilege group [<cword>] level [| {begin | exclude | include } <LINE>

Parameter

privilege	Web privilege
group	Web privilege group
CWORD	Valid words are 'Aggregation' 'DHCP' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'GARP' 'GVRP' 'Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'POE' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'UPnP' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow' 'sFlow'
level	Web privilege group level
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM16TAT2DPA# show web privilege group level
Group Name                    Privilege Level
                             CRO CRW SRO SRW
------------------------------ --- --- --- ---
ACTIVATE                       5  10   5  10
Aggregation                    5  10   5  10
cloud_management               5  10   5  10
Debug                         15  15  15  15
DHCP                           5  10   5  10
Dhcp_Client                    5  10   5  10
Diagnostics                    5  10   5  10
EEE                            5  10   5  10
GARP                           5  10   5  10
Green_Ethernet                 5  10   5  10
```

```
GVRP                          5  10   5  10
IP2                           5  10   5  10
IPMC_Snooping                   5  10   5  10
LACP                          5  10   5  10
LLDP                          5  10   5  10
Loop_Protect                   5  10   5  10
MAC_Table                      5  10   5  10
Maintenance                   15  15  15  15
Mirroring                      5  10   5  10
MVR                           5  10   5  10
NTP                           5  10   5  10
POE                           5  10   5  10
Ports                         5  10   1  10
Private_VLANs                   5  10   5  10
QoS                           5  10   5  10
RPC                           5  10   5  10
Security                       5  10   5  10
sFlow                         5  10   5  10
Spanning_Tree                   5  10   5  10
System                        5  10   1  10
Timer                         5  10   5  10
Trap_Event                     5  10   5  10
Trouble_Shooting                 5  10   5  10
UPnP                          5  10   5  10
VCL                           5  10   5  10
VLANs                         5  10   5  10
Voice_VLAN                     5  10   5  10
VTUN                          5  10   5  10
XXRP                          5  10   5  10
SM16TAT2DPA#
```

18 TERMINAL Commands

Set terminal line parameters

Syntax

terminal editing

terminal exec-timeout <0-1440> [<0-3600>]

terminal help

terminal history size <0-32>

terminal length <0 or 3-512>

terminal width <0 or 40-512>

Parameter

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
<0-1440>	Timeout in minutes
<0-3600>	Timeout in seconds
size	Set history buffer size
<0-32>	Number of history commands, 0 means disable
<0 or 3-512>	Number of lines on screen (0 for no pausing)
<0 or 40-512>	Number of characters on a screen line (0 for unlimited width)

EXAMPLE

```
SM16TAT2DPA# terminal help
Help may be requested at any point in a command by entering
a question mark '?'.  If nothing matches, the help list will
be empty and you must backup until entering a '?' shows the
available options.
Two styles of help are provided:
1. Full help is available when you are ready to enter a
   command argument (e.g. 'show ?') and describes each possible
   argument.
2. Partial help is provided when an abbreviated argument is entered
   and you want to know what arguments match the input
   (e.g. 'show pr?'.)

SM16TAT2DPA#
```

19 IP Commands

IPv4 commands

Syntax

ip dhcp retry interface vlan <vlan_id>

Parameter

dhcp	Dhcp commands
retry	Restart the DHCP query process
interface	Interface
vlan	Vlan interface
<vlan_id>	Vlan ID

EXAMPLE

```
SM16TAT2DPA# ip dhcp retry interface vlan 1
% Failed to restart DHCP client on VLAN = 1.
```

20 Traceroute Commands

Copy from source to destination

SYNTAX

traceroute ip <v_ip_addr> [protocol { icmp | udp | tcp }] [wait <v_wait_time>] [ttl <v_max_ttl>] [nqueries <v_nqueries>]

Parameter

ip	IP
<word1-255>	destination address
nqueries	Specify number of probe packets
protocol	Specify protocol including icmp, udp and tcp
ttl	Specify max TTL
wait	Specify wait time

EXAMPLE

```
SM16TAT2DPA# traceroute ip 22 nqueries 3 protocol icmp ttl 3 wait 3
traceroute to 22 (0.0.0.22), 3 hops max, 140 byte packets
 1  * * *
 2  * * *
 3  * * *
SM16TAT2DPA#
```

21 CLI Command Reference

This chapter introduces the CLI privilege levels and command modes.

- The privilege level determines whether or not the user can run the particular commands;
- If you can run the particular command, then you must run the command in the correct mode.

21.1 Privilege Level

Every command has a privilege level (0-15). You can run a command if the session's privilege level is greater than or equal to the command's privilege level. The session's privilege level initially comes from the login account's privilege level; it is possible to change the session's privilege level after logging in.

Privilege Level	Types of Commands at This Privilege Level
0	Display basic system information
13	Configure features except for login accounts, the authentication method sequence, multiple logins, and administrator and enable passwords.
15	Configure login accounts, the authentication method sequence, multiple logins, and administrator and enable passwords.

21.2 Command Modes

The CLI is divided into several modes. If a user has enough privilege to run a particular command, they have to run the command in the correct mode. The modes available depend on the session's privilege level.

Mode	Prompt	Command Function in This Mode
exec	<sys_name>#	Display current config, diagnostics, maintenance
config	<sys_name>(config)#	Configure features other than those below
Config-if	<sys_name>(config-interface)#	Configure ports
Config-if-vlan	<sys_name>(config-if-vlan)#	Configure static vlan
Config-line	<sys_name>(config-line)#	Line Configuration
Config-impc-profile	<sys_name>(config-impc-profile)#	IPMC Profile
Config-snmp-host	<sys_name>(config-snmp-host)#	SNMP Server Host
Config-stp-aggr	<sys_name>(config-stp-aggr)#	STP Aggregation
Config-dhcp-pool	<sys_name>(config-dhcp-pool)#	DHCP Pool Configuration
Config-rfc2544-profile	<sys_name>(config-rfc2544-profile)#	RFC2544 Profile

21.3 Command Summary

COMMAND	DESCRIPTION	P	M
show access management	Use the show access management user EXEC command without keywords to display the access management configuration, or use the statistics keyword to display statistics, or use the <AccessId> keyword to display the specific access management entry.	15	EXEC
clear access management statistics	Use the clear access management statistics privileged EXEC command to clear the statistics maintained by access management.	15	EXEC
access management	Use the access management global configuration command to enable the access management. Use the no form of this command to disable the access management.	15	GLOBAL_CONFIG
access management <1-16> <1-4094> <ipv4_addr> [to <ipv4_addr>] { [web] [snmp] [telnet] | all }	Use the access management <AccessId> global configuration command to set the access management entry for IPv4 address.	15	GLOBAL_CONFIG
access management <1-16> <1-4094> <ipv6_addr> [to <ipv6_addr>] { [web] [snmp] [telnet] | all }	Use the access management <AccessId> global configuration command to set the access management entry for IPv6 address.	15	GLOBAL_CONFIG
no access management <1~16>	Use the no access management <AccessIdList> global configuration command to delete the specific access management entry.	15	GLOBAL_CONFIG
access-list action { permit | deny }	Use the access-list action interface configuration command to configure access-list action. The access-list interface configuration will affect the received frames if it doesn't match any	15	INTERFACE_PORT_LIST

	ACE.		
access-list rate-limiter <1-16>	Use the access-list rate-limiter interface configuration command to configure the access-list rate-limiter ID . The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list rate-limiter	Use the no access-list rate-limiter interface configuration command to disable the access-list rate-limiter. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list { redirect | port-copy } interface { <port_type_id> | <port_type_list> }	Use the no access-list redirect interface configuration command to configure the access-list redirect interface.	15	INTERFACE_PORT_LIST
no access-list { redirect | port-copy }	Use the no access-list redirect interface configuration command to disable the access-list redirect. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list mirror	Use the access-list mirror interface configuration command to enable access-list mirror. Use the no form of this command to disable access-list mirror. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list logging	Use the access-list logging interface configuration command to enable access-list logging. Use the no form of this command to disable access-list logging. The access-list interface configuration will affect the received	15	INTERFACE_PORT_LIST

	frames if it doesn't match any ACE.		
access-list shutdown	Use the access-list shutdown interface configuration command to enable access-list shutdown. Use the no form of this command to disable access-list shutdown. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list evc-policer <1-256>	Use the access-list evc-policer interface configuration command to configure the access-list evc-policer ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list evc-policer	Use the no access-list evc-policer interface configuration command to configure the access-list evc-policer ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list policy <0-255>	Use the access-list policy interface configuration command to configure the access-list policy value. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list policy	Use the no access-list policy interface configuration command to restore the default access-list policy ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list port-state	Use the access-list port-state interface configuration command to enable access-list port state. Use the no form of	15	INTERFACE_PORT_LIST

	this command to disable access-list port state.		
access-list rate-limiter [<1~16>] { pps <1,2,4,8,16,32,64,128,256,512>| 100pps <1-32767> | kpps <1,2,4,8,16,32,64,128,256,512,1024> | 100kbps <0-10000> }	Use the access-list rate-limiter global configuration command to configure the access-list rate-limiter.	15	INTERFACE_PORT_LIST
default access-list rate-limiter [<1~16>]	Use the default access-list rate-limiter global configuration command to restore the default setting of access-list rate-limiter.	15	GLOBAL_CONFIG
access-list ace [update] <1-256> [next {<1-256>|last}] [ingress {switch <switch_id>|switchport {<1-53>|<1~53>}|interface {<port_type_id>|<port_type_list>}|any}] [policy <0-255> [policy-bitmask <0x0-0xFF>]] [tag {tagged|untagged|any}] [vid {<1-4095>|any}] [tag-priority {<0-7>|0-1|2-3|4-5|6-7|0-3|4-7|any}] [dmac-type {unicast|multicast|broadcast|any}] [frametype { any| etype [etype-value {<0x600-0x7ff,0x801-0x805,0x807-0x86dc,0x86de-0xffff>|any}] [smac {<mac_addr>|any}] [dmac {<mac_addr>|any}]| arp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [smac {<mac_addr>|any}] [arp-opcode {arp|rarp|other|any}] [arp-flag [arp-request {<0-1>|any}] [arp-smac {<0-1>|any}] [arp-tmac {<0-1>|any}] [arp-len {<0-1>|any}] [arp-ip {<0-1>|any}] [arp-ether {<0-1>|any}]]| ipv4 [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [ip-protocol {<0,2-5,7-16,18-255>|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-icmp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [icmp-type {<0-255>|any}] [icmp-code	Use the access-list ace global configuration command to set the access-list ace. The command without the update keywrod will creates or overwrites an existing ACE, any unspecified parameter will be set to its default value. Use the update keyword to update an existing ACE and only specified parameter are modified. The ACE must ordered by an appropriate sequence, the received frame will only be hit on the first matched ACE. Use the next or last keyword to adjust the ACE's sequence order.	15	GLOBAL_CONFIG

{<0-255>|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-udp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-tcp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]] [tcp-flag [tcp-fin {<0-1>|any}] [tcp-syn {<0-1>|any}] [tcp-rst {<0-1>|any}] [tcp-psh {<0-1>|any}] [tcp-ack {<0-1>|any}] [tcp-urg {<0-1>|any}]]| ipv6 [next-header {<0-5,7-16,18-57,59-255>|any}] [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [hop-limit {<0-1>|any}]| ipv6-icmp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [icmp-type {<0-255>|any}] [icmp-code {<0-255>|any}] [hop-limit {<0-1>|any}]| ipv6-udp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [hop-limit {<0-1>|any}]| ipv6-tcp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [hop-limit {<0-1>|any}] [tcp-flag [tcp-fin {<0-1>|any}] [tcp-syn {<0-1>|any}] [tcp-rst {<0-1>|any}] [tcp-psh {<0-1>|any}] [tcp-ack {<0-1>|any}] [tcp-urg {<0-1>|any}]]}] [action {permit|deny|filter {switchport <1~53>|interface <port_type_list>}}] [rate-limiter {<1-16>|disable}] [evc-policer {<1-256>|disable}] [{redirect|port-copy} {switchport {<1-53>|<1~53>}|interface			

{<port_type_id>|<port_type_list>}|disable}] [mirror [disable]] [logging [disable]] [shutdown [disable]] [lookup [disable]]			
no access-list ace <1~256>	Use the no access-list ace global configuration command to delete the access-list ace.	15	GLOBAL_CONFIG
show access-list [interface [<port_type_list>]] [rate-limiter [<1~16>]] [ace statistics [<1~256>]]	Use the show access-list privilege EXEC command without keywords to display the access-list configuration, or particularly the show access-list interface for the access-list interface configuration, or use the rate-limiter keyword to display access-list rate-limiter configuration, or use the ace keyword to display access-list ace configuration.	15	EXEC
clear access-list ace statistics	Use the clear access-list ace statistics privileged EXEC command to clear the statistics maintained by access-list, including access-list interface statistics and ACE's statistics.	15	EXEC
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>]	Use the show access-list ace-status privilege EXEC command without keywords to display the access-list ace status for all access-list users, or particularly the access-list user for the access-list ace status. Use conflicts keyword to display the access-list ace that doesn't apply on on the hardware. In other word, it means the specific ACE is not applied to the hardware due to hardware limitations.	15	EXEC
show aggregation [mode]		15	EXEC
aggregation mode { [smac] [dmac] [ip] [port] }		15	GLOBAL_CONFIG
no aggregation mode		15	GLOBAL_CONFIG

aggregation group <uint>		15	INTERFACE_PORT_LIST
no aggregation group		15	INTERFACE_PORT_LIST
ip arp inspection	Use the ip arp inspection global configuration command to globally enable ARP inspection. Use the no form of this command to globally disable ARP inspection.	13	GLOBAL_CONFIG
ip arp inspection vlan <vlan_list>	Use the ip arp inspection global configuration command to globally enable ARP inspection. Use the no form of this command to globally disable ARP inspection.	13	GLOBAL_CONFIG
ip arp inspection vlan <vlan_list> logging { deny | permit | all }		13	GLOBAL_CONFIG
no ip arp inspection vlan <vlan_list> logging		13	GLOBAL_CONFIG
ip arp inspection entry interface <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>		13	GLOBAL_CONFIG
arp_inspection_translate		13	GLOBAL_CONFIG
arp_inspection_port_mode	Use the ip arp inspection trust interface configuration command to configure a port as trusted for ARP inspection purposes. Use the no form of this command to configure a port as untrusted.	13	INTERFACE_PORT_LIST
arp_inspection_port_check_vlan	Use the ip arp inspection check-vlan interface configuration command to configure a port as VLAN mode for ARP inspection purposes. Use the no form of this command to configure a port as default.	13	INTERFACE_PORT_LIST
ip arp inspection logging { deny | permit | all }	Use the ip arp inspection logging interface configuration command to configure a port as some logging mode for ARP inspection purposes. Use the no form of this command to configure a	13	INTERFACE_PORT_LIST

	port as logging none.		
no ip arp inspection logging	Use the no ip arp inspection logging interface configuration command to configure a port as default logging mode for ARP inspection purposes.	13	INTERFACE_PORT_LIST
show ip arp inspection [interface <port_type_list> | vlan <vlan_list>]		0	EXEC
show ip arp inspection entry [dhcp-snooping | static] [interface <port_type_list>]		13	EXEC
aaa authentication login { console | telnet | ssh | http } { [local | radius | tacacs] ... }	Use the aaa authentication login command to configure the authentication methods.	15	GLOBAL_CONFIG
no aaa authentication login { console | telnet | ssh | http }		15	GLOBAL_CONFIG
radius-server timeout <1-1000>	Use the radius-server timeout command to configure the global RADIUS timeout value.	15	GLOBAL_CONFIG
no radius-server timeout	Use the no radius-server timeout command to reset the global RADIUS timeout value to default.	15	GLOBAL_CONFIG
radius-server retransmit <1-1000>	Use the radius-server retransmit command to configure the global RADIUS retransmit value.	15	GLOBAL_CONFIG
no radius-server retransmit	Use the no radius-server retransmit command to reset the global RADIUS retransmit value to default.	15	GLOBAL_CONFIG
radius-server deadtime <1-1440>	Use the radius-server deadtime command to configure the global RADIUS deadtime value.	15	GLOBAL_CONFIG
no radius-server deadtime	Use the no radius-server deadtime command to reset the global RADIUS deadtime value to default.	15	GLOBAL_CONFIG
radius-server key <line1-63>	Use the radius-server key command to configure the global RADIUS key.	15	GLOBAL_CONFIG
no radius-server key	Use the no radius-server key command	15	GLOBAL_CONFIG

	to remove the global RADIUS key.		
radius-server attribute 4 <ipv4_ucast>		15	GLOBAL_CONFIG
no radius-server attribute 4		15	GLOBAL_CONFIG
radius-server attribute 95 <ipv6_ucast>		15	GLOBAL_CONFIG
no radius-server attribute 95		15	GLOBAL_CONFIG
radius-server attribute 32 <line1-253>		15	GLOBAL_CONFIG
no radius-server attribute 32		15	GLOBAL_CONFIG
radius-server host <word1-255> [auth-port <0-65535>] [acct-port <0-65535>] [timeout <1-1000>] [retransmit <1-1000>] [key <line1-63>]	Use the radius-server host command to add a new RADIUS host.	15	GLOBAL_CONFIG
no radius-server host <word1-255> [auth-port <0-65535>] [acct-port <0-65535>]	Use the no radius-server host command to delete an existing RADIUS host.	15	GLOBAL_CONFIG
tacacs-server timeout <1-1000>	Use the tacacs-server timeout command to configure the global TACACS+ timeout value.	15	GLOBAL_CONFIG
no tacacs-server timeout	Use the no tacacs-server timeout command to reset the global TACACS+ timeout value to default.	15	GLOBAL_CONFIG
tacacs-server deadtime <1-1440>	Use the tacacs-server deadtime command to configure the global TACACS+ deadtime value.	15	GLOBAL_CONFIG
no tacacs-server deadtime	Use the no tacacs-server deadtime command to reset the global TACACS+ deadtime value to default.	15	GLOBAL_CONFIG
tacacs-server key <line1-63>	Use the tacacs-server key command to configure the global TACACS+ key.	15	GLOBAL_CONFIG
no tacacs-server key	Use the no tacacs-server key command to remove the global TACACS+ key.	15	GLOBAL_CONFIG
tacacs-server host <word1-255> [port <0-65535>] [timeout <1-1000>] [key <line1-63>]	Use the tacacs-server host command to add a new TACACS+ host.	15	GLOBAL_CONFIG
no tacacs-server host <word1-255> [port <0-65535>]	Use the no tacacs-server host command to delete an existing TACACS+ host.	15	GLOBAL_CONFIG
show aaa	Use the show aaa command to view the currently active authentication login	15	GLOBAL_CONFIG

	methods.		
show radius-server [statistics]	Use the show radius-server command to view the current RADIUS configuration and statistics.	15	EXEC
show tacacs-server	Use the show tacacs-server command to view the current TACACS+ configuration.	15	EXEC
debug auth { console | telnet | ssh | http } <word31> [<word31>]		debug	EXEC
clock summer-time <word16> recurring [<1-5> <1-7> <1-12> <hhmm> <1-5> <1-7> <1-12> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
clock summer-time <word16> date [<1-12> <1-31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
no clock summer-time		13	GLOBAL_CONFIG
clock timezone <word16> <-23-23> [<0-59>]		13	GLOBAL_CONFIG
no clock timezone		13	GLOBAL_CONFIG
show clock detail		0	EXEC
clock summer-time <word16> recurring [<1-5> <1-7> <1-12> <hhmm> <1-5> <1-7> <1-12> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
clock summer-time <word16> date [<1-12> <1-31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
no clock summer-time		13	GLOBAL_CONFIG
clock timezone <word16> <-23-23> [<0-59>]		13	GLOBAL_CONFIG
no clock timezone		13	GLOBAL_CONFIG
show clock detail		0	EXEC
show ip dhcp detailed statistics { server | client | snooping | relay | normal-forward | combined } [interface <port_type_list>]	Use the show ip dhcp detailed statistics user EXEC command to display statistics. Notice that the normal forward per-port TX statistics isn't increased if the incoming DHCP packet is done by L3 forwarding mechanism. Notice that	0	EXEC

	the normal forward per-port TX statistics isn't increased if the incoming DHCP packet is done by L3 forwarding mechanism.		
clear ip dhcp detailed statistics { server | client | snooping | relay | helper | all } [interface <port_type_list>]	Use the clear ip dhcp detailed statistics privileged EXEC command to clear the statistics, or particularly the IP DHCP statistics for the interface. Notice that except for clear statistics on all interfaces, clear the statistics on specific port may not take effect on global statistics since it gathers the different layer overview.	15	EXEC
clear ip dhcp relay statistics	Use the clear ip dhcp relay statistics privileged EXEC command to clear the statistics maintained by IP DHCP realy.	15	EXEC
show ip dhcp relay [statistics]	Use the show ip dhcp relay user EXEC command without keywords to display the DHCP relay configuration, or use the statistics keyword to display statistics.	0	EXEC
ip dhcp relay	Use the ip dhcp relay global configuration command to enable the DHCP relay server. Use the no form of thiscommand to disable the DHCP relay server.	15	GLOBAL_CONFIG
ip helper-address <ipv4_ucast>	Use the ip helper-address global configuration command to configure the host address of DHCP relay server.	15	GLOBAL_CONFIG
no ip helper-address	Use the no ip helper-address global configuration command to clear the host address of DHCP relay server.	15	GLOBAL_CONFIG
ip dhcp relay information option	Use the ip dhcp relay information option global configuration command to enable the DHCP relay information option. Use the no form of this command to disable	15	GLOBAL_CONFIG

	the DHCP relay information option. The option 82 circuit ID format as "[vlan_id][module_id][port_no]". The first four characters represent the VLAN ID, the fifth and sixth characters are the module ID(in standalone device it always equal 0, in stackable device it means switch ID), and the last two characters are the port number. For example, "00030108" means the DHCP message receive form VLAN ID 3, switch ID 1, port No 8. And the option 82 remote ID value is equal the switch MAC address.		
ip dhcp relay information policy { drop | keep | replace }	Use the ip dhcp relay information policy global configuration command to configure the DHCP relay information policy. When DHCP relay information mode operation is enabled, if the agent receives a DHCP message that already contains relay agent information it will enforce the policy. The 'Replace' policy is invalid when relay information mode is disabled.	15	GLOBAL_CONFIG
no ip dhcp relay information policy	Use the ip dhcp relay information policy global configuration command to restore the default DHCP relay information policy.	15	GLOBAL_CONFIG
show ip dhcp pool [<word32>]		0	EXEC
show ip dhcp pool counter [<word32>]		debug	EXEC
show ip dhcp excluded-address		0	EXEC
show ip dhcp server binding [state {allocated | committed | expired}] [type {automatic | manual | expired}]		0	EXEC
show ip dhcp server binding <ipv4_ucast>		0	EXEC

show ip dhcp server		0	EXEC
show ip dhcp server statistics		0	EXEC
show ip dhcp server declined-ip		0	EXEC
show ip dhcp server declined-ip <ipv4_addr>		0	EXEC
clear ip dhcp server binding <ipv4_ucast>		13	EXEC
clear ip dhcp server binding { automatic | manual | expired }		13	EXEC
clear ip dhcp server statistics		13	EXEC
ip dhcp server		13	GLOBAL_CONFIG
ip dhcp excluded-address <ipv4_addr> [<ipv4_addr>]		13	GLOBAL_CONFIG
no ip dhcp pool <word32>		13	GLOBAL_CONFIG
ip dhcp server		13	INTERFACE_VLAN
network <ipv4_addr> <ipv4_netmask>		13	DHCP_POOL
no network		13	DHCP_POOL
broadcast <ipv4_addr>		13	DHCP_POOL
no broadcast		13	DHCP_POOL
default-router <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no default-router		13	DHCP_POOL
lease { <0-365> [<0-23> [<uint>]] | infinite }		13	DHCP_POOL
no lease		13	DHCP_POOL
domain-name <word128>		13	DHCP_POOL
no domain-name		13	DHCP_POOL
dns-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no dns-server		13	DHCP_POOL
ntp-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no ntp-server		13	DHCP_POOL
netbios-name-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no netbios-name-server		13	DHCP_POOL
netbios-node-type { b-node | h-node | m-node | p-node }		13	DHCP_POOL

no netbios-node-type		13	DHCP_POOL
netbios-scope <line128>		13	DHCP_POOL
no netbios-scope		13	DHCP_POOL
nis-domain-name <word128>		13	DHCP_POOL
no nis-domain-name		13	DHCP_POOL
nis-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no nis-server		13	DHCP_POOL
host <ipv4_ucast> <ipv4_netmask>		13	DHCP_POOL
no host		13	DHCP_POOL
client-identifier { fqdn <line128> | mac-address <mac_addr> }		13	DHCP_POOL
no client-identifier		13	DHCP_POOL
hardware-address <mac_ucast>		13	DHCP_POOL
no hardware-address		13	DHCP_POOL
client-name <word32>		13	DHCP_POOL
no client-name		13	DHCP_POOL
vendor class-identifier <string64> specific-info <hexval32>		13	DHCP_POOL
no vendor class-identifier <string64>		13	DHCP_POOL
debug dhcp server memsize		debug	EXEC
debug dhcp server declined add <ipv4_addr>		debug	EXEC
debug dhcp server declined delete <ipv4_addr>		debug	EXEC
show ip dhcp snooping [interface <port_type_list>]	Use the show ip dhcp snooping user EXEC command to display the DHCP snooping configuration.	0	EXEC
show ip dhcp snooping [statistics] [interface <port_type_list>]	Use the show ip dhcp snooping user EXEC command without keywords to display the DHCP snooping configuration, or particularly the ip dhcp snooping statistics for the interface, or use the statistics keyword to display statistics.	0	EXEC
clear ip dhcp snooping statistics [interface <port_type_list>]	Use the clear ip dhcp snooping statistics privileged EXEC command to clear the	15	EXEC

	statistics maintained by IP DHCP snooping, or particularly the IP DHCP snooping statistics for the interface.		
ip dhcp snooping	Use the ip dhcp snooping global configuration command to globally enable DHCP snooping. Use the no form of this command to globally disable DHCP snooping.	15	GLOBAL_CONFIG
dhcp_snooping_port_mode	Use the ip dhcp snooping trust interface configuration command to configure a port as trusted for DHCP snooping purposes. Use the no form of this command to configure a port as untrusted.	15	INTERFACE_PORT_LIST
show ip dhcp snooping table	Use the show ip dhcp snooping table user EXEC command to display the IP assigned information that is obtained from DHCP server except for local VLAN interface IP addresses.	15	EXEC
ip name-server { <ipv4_ucast> | dhcp [interface vlan <vlan_id>] }	Set the DNS server for resolving domain names	15	GLOBAL_CONFIG
no ip name-server	Stop resolving domain names by accessing DNS server	15	GLOBAL_CONFIG
show ip name-server	Display the active domain name server information	0	EXEC
ip dns proxy	Enable DNS proxy service	15	GLOBAL_CONFIG
show version	Use show version to display firmware information.	0	EXEC
firmware upgrade <word>	Use firmware upgrade to load new firmware image to the switch.	15	EXEC
firmware swap	Use firmware swap to swap the active and alternative firmware images.	15	EXEC
show green-ethernet fan	Shows Fan status (chip Temperature and fan speed).	15	GLOBAL_CONFIG
green-ethernet fan temp-on <-127-127>	Sets temperature at which to turn fan on	15	GLOBAL_CONFIG

	to the lowest speed.		
no green-ethernet fan temp-on	Sets temperature at which to turn fan on to the lowest speed to default.	15	GLOBAL_CONFIG
green-ethernet fan temp-max <-127-127>	Sets temperature where the fan must be running at full speed.	15	GLOBAL_CONFIG
no green-ethernet fan temp-max	Sets temperature at which the fan will be running at full speed to default.	15	GLOBAL_CONFIG
green-ethernet led interval <0~24> intensity <0-100>	Use green-ethernet led interval to configure the LED intensity at specific interval of the day.	15	GLOBAL_CONFIG
no green-ethernet led interval <0~24>		15	GLOBAL_CONFIG
green-ethernet led on-event { [link-change <0-65535>] [error] }*1	Use green-ethernet led on-event to configure when to turn LEDs intensity to 100%%.	15	GLOBAL_CONFIG
no green-ethernet led on-event [link-change] [error]		15	GLOBAL_CONFIG
show green-ethernet eee [interface <port_type_list>]	Shows Green Ethernet EEE status.	15	EXEC
show green-ethernet short-reach [interface <port_type_list>]	Shows Green Ethernet short-reach status.	15	EXEC
show green-ethernet energy-detect [interface <port_type_list>]	Shows Green Ethernet energy-detect status.	15	EXEC
show green-ethernet [interface <port_type_list>]	Shows Green Ethernet status.	15	EXEC
green-ethernet eee	Sets EEE mode.	15	INTERFACE_PORT_LIST
green-ethernet eee urgent-queues [<range_list>]	Sets EEE urgeent queues.	15	INTERFACE_PORT_LIST
green-ethernet eee optimize-for-power	Sets if EEE should be optimized for least traffic latency or least power comsumption	15	GLOBAL_CONFIG
green-ethernet energy-detect	Enables energy-detect power savings.	15	INTERFACE_PORT_LIST
green-ethernet short-reach	Enables short-reach power savings.	15	INTERFACE_PORT_LIST
show ip http server secure status	Use the show ip http server secure status privileged EXEC command to display the secure HTTP web server status.	15	EXEC
ip http secure-server	Use the ip http secure-server global	15	GLOBAL_CONFIG

	configuration command to enable the secure HTTP web server. Use the no form of this command to disable the secure HTTP web server.		
ip http secure-redirect	Use the http secure-redirect global configuration command to enable the secure HTTP web redirection. When the secure HTTP web server is enabled, the feature automatic redirect the none secure HTTP web connection to the secure HTTP web connection. Use the no form of this command to disable the secure HTTP web redirection.	15	GLOBAL_CONFIG
reload { { { cold | warm } [sid <1-16>] } | { defaults [keep-ip] } }	Reload system, either cold (reboot) or restore defaults without reboot.	15	EXEC
show running-config [all-defaults]		15	EXEC
show running-config feature <cword> [all-defaults]		15	EXEC
show running-config interface <port_type_list> [all-defaults]		15	EXEC
show running-config interface vlan <vlan_list> [all-defaults]		15	EXEC
show running-config vlan <vlan_list> [all-defaults]		15	EXEC
show running-config line { console | vty } <range_list> [all-defaults]		15	EXEC
copy { startup-config | running-config | <word> } { startup-config | running-config | <word> } [syntax-check]		15	EXEC
dir		15	EXEC
more <word>		15	EXEC
delete <word>		debug	EXEC
debug icfg wipe-flash-fs-conf-block		debug	EXEC
debug icfg wipe-specific-block {local|global} <uint>		debug	EXEC
debug icfg silent-upgrade status		debug	EXEC
debug icfg dir		debug	EXEC

debug icfg error-trace <line>		debug	EXEC
ip routing	Enable routing for IPv4 and IPv6	15	GLOBAL_CONFIG
no ip routing	Disable routing for IPv4 and IPv6	15	GLOBAL_CONFIG
ip address {{<ipv4_addr> <ipv4_netmask>} | {dhcp [fallback <ipv4_addr> <ipv4_netmask> [timeout <uint>]]}}	IP address configuration	15	INTERFACE_VLAN
ip dhcp retry interface vlan <vlan_id>	Restart the dhcp client	15	EXEC
no ip address	IP address configuration	15	INTERFACE_VLAN
ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>	Add new IP route	15	GLOBAL_CONFIG
no ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>	Delete an existing IP route	15	GLOBAL_CONFIG
show interface vlan [<vlan_list>]	Vlan interface status	15	EXEC
show ip interface brief	Brief IP interface status	0	EXEC
show ip arp	Print ARP table	0	EXEC
clear ip arp	Clear ARP cache	0	EXEC
show ip route	Routing table status	0	EXEC
ping ip <word1-255> [repeat <1-60>] [size <2-1452>] [interval <0-30>]		0	EXEC
clear ip statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <0~255>]		0	EXEC
show ip statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <0~255>]		0	EXEC
debug ipstack log [ERR|NOERR] [WARNING|NOWARNING] [NOTICE|NONOTICE] [INFO|NOINFO] [DEBUG|NODEBUG] [MDEBUG|NOMDEBUG] [IOCTL|NOIOCTL] [INIT|NOINIT] [ADDR|NOADDR] [FAIL|NOFAIL] [EMERG|NOEMERG] [CRIT|NOCRIT]		debug	EXEC
debug ip kmem		debug	EXEC
debug ip route		debug	EXEC
debug ip sockets		debug	EXEC
debug ip lpm stat ip <vlan_list>		debug	EXEC
debug ip lpm stat ipv6 <vlan_list>		debug	EXEC
debug ip lpm stat clear <vlan_list>		debug	EXEC

debug ip lpm sticky clear		debug	EXEC
debug ip lpm usage		debug	EXEC
debug ip global interface table change		debug	EXEC
debug ip vlan ipv4 created <vlan_list>		debug	EXEC
debug ip vlan ipv4 changed <vlan_list>		debug	EXEC
debug ip vlan ipv6 created <vlan_list>		debug	EXEC
debug ip vlan ipv6 changed <vlan_list>		debug	EXEC
show ip igmp snooping mrouter [detail]		0	EXEC
clear ip igmp snooping [vlan <vlan_list>] statistics		15	EXEC
show ip igmp snooping [vlan <vlan_list>] [group-database [interface <port_type_list>] [sfm-information]] [detail]		0	EXEC
ip igmp snooping		15	GLOBAL_CONFIG
ip igmp unknown-flooding		15	GLOBAL_CONFIG
ip igmp host-proxy [leave-proxy]		15	GLOBAL_CONFIG
ip igmp ssm-range <ipv4_mcast> <4-32>		15	GLOBAL_CONFIG
no ip igmp ssm-range		15	GLOBAL_CONFIG
ip igmp snooping vlan <vlan_list>		15	GLOBAL_CONFIG
no ip igmp snooping vlan [<vlan_list>]		15	GLOBAL_CONFIG
ip igmp snooping		15	INTERFACE_VLAN
ip igmp snooping querier { election | address <ipv4_ucast> }		15	INTERFACE_VLAN
no ip igmp snooping querier { election | address }		15	INTERFACE_VLAN
ip igmp snooping compatibility { auto | v1 | v2 | v3 }		15	INTERFACE_VLAN
no ip igmp snooping compatibility		15	INTERFACE_VLAN
ip igmp snooping priority <0-7>		15	INTERFACE_VLAN
no ip igmp snooping priority		15	INTERFACE_VLAN
ip igmp snooping robustness-variable <1-255>		15	INTERFACE_VLAN
no ip igmp snooping robustness-variable		15	INTERFACE_VLAN
ip igmp snooping query-interval <1-31744>		15	INTERFACE_VLAN
no ip igmp snooping query-interval		15	INTERFACE_VLAN
ip igmp snooping query-max-response-time <0-31744>		15	INTERFACE_VLAN
no ip igmp snooping query-max-response-time		15	INTERFACE_VLAN
ip igmp snooping last-member-query-interval		15	INTERFACE_VLAN

<0-31744>			
no ip igmp snooping last-member-query-interval		15	INTERFACE_VLAN
ip igmp snooping unsolicited-report-interval <0-31744>		15	INTERFACE_VLAN
no ip igmp snooping unsolicited-report-interval		15	INTERFACE_VLAN
ip igmp snooping immediate-leave		15	INTERFACE_VLAN
ip igmp snooping mrouter		15	INTERFACE_PORT_LIST
ip igmp snooping max-groups <1-10>		15	INTERFACE_PORT_LIST
no ip igmp snooping max-groups		15	INTERFACE_PORT_LIST
ip igmp snooping filter <word16>		15	INTERFACE_PORT_LIST
no ip igmp snooping filter		15	INTERFACE_PORT_LIST
ipv6 mld snooping		15	GLOBAL_CONFIG
ipv6 mld unknown-flooding		15	GLOBAL_CONFIG
ipv6 mld host-proxy [leave-proxy]		15	GLOBAL_CONFIG
ipv6 mld ssm-range <ipv6_mcast> <8-128>		15	GLOBAL_CONFIG
no ipv6 mld ssm-range		15	GLOBAL_CONFIG
ipv6 mld snooping vlan <vlan_list>		15	GLOBAL_CONFIG
no ipv6 mld snooping vlan [<vlan_list>]		15	GLOBAL_CONFIG
ipv6 mld snooping immediate-leave		15	INTERFACE_PORT_LIST
ipv6 mld snooping mrouter		15	INTERFACE_PORT_LIST
ipv6 mld snooping max-groups <1-10>		15	INTERFACE_PORT_LIST
no ipv6 mld snooping max-groups		15	INTERFACE_PORT_LIST
ipv6 mld snooping filter <word16>		15	INTERFACE_PORT_LIST
no ipv6 mld snooping filter		15	INTERFACE_PORT_LIST
show ipv6 mld snooping mrouter [detail]		0	EXEC
clear ipv6 mld snooping [vlan <vlan_list>] statistics		15	EXEC
show ipv6 mld snooping [vlan <vlan_list>] [group-database [interface <port_type_list>] [sfm-information]] [detail]		0	EXEC
ipv6 mld snooping		15	INTERFACE_VLAN
ipv6 mld snooping querier election		15	INTERFACE_VLAN
ipv6 mld snooping compatibility { auto | v1 | v2 }		15	INTERFACE_VLAN
no ipv6 mld snooping compatibility		15	INTERFACE_VLAN
ipv6 mld snooping priority <0-7>		15	INTERFACE_VLAN

no ipv6 mld snooping priority		15	INTERFACE_VLAN
ipv6 mld snooping robustness-variable <1-255>		15	INTERFACE_VLAN
no ipv6 mld snooping robustness-variable		15	INTERFACE_VLAN
ipv6 mld snooping query-interval <1-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping query-interval		15	INTERFACE_VLAN
ipv6 mld snooping query-max-response-time <0-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping query-max-response-time		15	INTERFACE_VLAN
ipv6 mld snooping last-member-query-interval <0-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping last-member-query-interval		15	INTERFACE_VLAN
ipv6 mld snooping unsolicited-report-interval <0-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping unsolicited-report-interval		15	INTERFACE_VLAN
ip verify source		13	GLOBAL_CONFIG
i ip verify source		13	INTERFACE_PORT_LIST
ip verify source limit <0-2>		13	INTERFACE_PORT_LIST
no ip verify source limit		13	INTERFACE_PORT_LIST
ip verify source translate		13	GLOBAL_CONFIG
show ip verify source [interface <port_type_list>]		0	EXEC
show ip source binding [dhcp-snooping | static] [interface <port_type_list>]		13	EXEC
ip source binding interface <port_type_id> <vlan_id> <ipv4_ucast> <mac_ucast>		13	GLOBAL_CONFIG
ip source binding interface <port_type_id> <vlan_id> <ipv4_ucast> <ipv4_netmask>		13	GLOBAL_CONFIG
show lacp { internal | statistics | system-id | neighbour }	Show LACP configuration and status	15	EXEC
clear lacp statistics	Clear all LACP statistics	15	EXEC
lacp system-priority <1-65535>	Set the LACP system priority	15	GLOBAL_CONFIG
lacp	Enable LACP on an interface	15	INTERFACE_PORT_LIST
lacp key { <1-65535> | auto }	Set the LACP key	15	INTERFACE_PORT_LIST
lacp role { active | passive }	Set the LACP role, active or passive in transmitting BPDUs	15	INTERFACE_PORT_LIST
lacp timeout { fast | slow }	Set the LACP timeout, i.e. how fast to	15	INTERFACE_PORT_LIST

	transmit BPDUs, once a sec or once each 30 sec.		
lacp port-priority <1-65535>	Set the lacp port priority,	15	INTERFACE_PORT_LIST
lldp holdtime <2-10>	Sets LLDP hold time (The neighbor switch will discarded the LLDP information after \"hold time\" multiplied with \"timer\" seconds)	15	GLOBAL_CONFIG
no lldp holdtime		15	GLOBAL_CONFIG
lldp timer <5-32768>	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).	15	GLOBAL_CONFIG
no lldp timer		15	GLOBAL_CONFIG
lldp reinit <1-10>	Sets LLDP reinitialization delay.	15	GLOBAL_CONFIG
no lldp reinit	Sets LLDP reinitialization delay.	15	GLOBAL_CONFIG
lldp tlv-select {management-address | port-description | system-capabilities | system-description | system-name}	Enables/disables LLDP optional TLVs.	15	INTERFACE_PORT_LIST
lldp transmit	Sets if switch will transmit LLDP frames.	15	INTERFACE_PORT_LIST
lldp receive	Sets if switch will update LLDP entry table with incoming LLDP information.	15	INTERFACE_PORT_LIST
show lldp neighbors [interface <port_type_list>]	Shows the LLDP neighbors information.	0	EXEC
show lldp statistics [interface <port_type_list>]	Shows the LLDP statistics information.	0	EXEC
clear lldp statistics	Clears the LLDP statistics.	0	EXEC
lldp transmission-delay <1-8192>	Sets LLDP transmision-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)	15	GLOBAL_CONFIG
no lldp transmission-delay		15	GLOBAL_CONFIG
lldp cdp-aware	Configures if the interface will be CDP aware (CDP discovery information is added to the LLDP neighbor table)	15	INTERFACE_PORT_LIST
show lldp med remote-device [interface <port_type_list>]	Show LLDP-MED neighbor device information.	0	EXEC
show lldp med media-vlan-policy [<0~31>]	Show media vlan policy(ies)	0	EXEC

lldp med location-tlv latitude { north | south } <word8>	Use the lldp med location-tlv latitude to configure the location latitude.	15	GLOBAL_CONFIG
no lldp med location-tlv latitude	Use no lldp med location-tlv latitude to configure the latitude location to north 0 degrees.	15	GLOBAL_CONFIG
lldp med location-tlv longitude { west | east } <word9>	Use the lldp med location-tlv longitude to configure the location longitude.	15	GLOBAL_CONFIG
no lldp med location-tlv longitude	Use no lldp med location-tlv longitude to configure the longitude location to north 0 degrees.	15	GLOBAL_CONFIG
lldp med location-tlv altitude { meters | floors } <word11>	Use the lldp med location-tlv altitude to configure the location altitude.	15	GLOBAL_CONFIG
no lldp med location-tlv altitude	Use the lldp med location-tlv altitude to configure the location altitude.	15	GLOBAL_CONFIG
lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code } <string250>	Use lldp med location-tlv civic-addr to configure the civic address.	15	GLOBAL_CONFIG
no lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code }		15	GLOBAL_CONFIG
lldp med location-tlv elin-addr <dword25>	Use the lldp med location-tlv elin-addr to configure value for the Emergency Call Service	15	GLOBAL_CONFIG
no lldp med location-tlv elin-addr	Use the no lldp med location-tlv elin-addr to configure value for the	15	GLOBAL_CONFIG

	Emergency Call Service to default value.		
lldp med transmit-tlv [capabilities] [location] [network-policy]	Use the lldp med transmit-tlv to configure which TLVs to transmit to link partner.	15	INTERFACE_PORT_LIST
no lldp med transmit-tlv [capabilities] [location] [network-policy]		15	INTERFACE_PORT_LIST
lldp med datum { wgs84 | nad83-navd88 | nad83-mllw }	Use the lldp med datum to configure the datum (geodetic system) to use.	15	GLOBAL_CONFIG
no lldp med datum		15	GLOBAL_CONFIG
lldp med fast <1-10>	Use the lldp med fast to configure the number of times the fast start LLDPDU are being sent during the activation of the fast start mechanism defined by LLDP-MED (1-10).	15	GLOBAL_CONFIG
no lldp med fast		15	GLOBAL_CONFIG
lldp med media-vlan-policy <0-31> { voice | voice-signaling | guest-voice-signaling | guest-voice | softphone-voice | video-conferencing | streaming-video | video-signaling } { tagged <vlan_id> | untagged } [l2-priority <0-7>] [dscp <0-63>]	Use the media-vlan-policy to create a policy, which can be assigned to an interface.	15	GLOBAL_CONFIG
no lldp med media-vlan-policy <0~31>		15	GLOBAL_CONFIG
lldp med media-vlan policy-list <range_list>	Use the media-vlan policy-list to assign policy to the interface.	15	INTERFACE_PORT_LIST
loop-protect	Loop protection configuration	15	GLOBAL_CONFIG
loop-protect transmit-time <1-10>	Loop protection transmit time interval	15	GLOBAL_CONFIG
no loop-protect transmit-time		15	GLOBAL_CONFIG
loop-protect shutdown-time <0-604800>	Loop protection shutdown time interval	15	GLOBAL_CONFIG
no loop-protect shutdown-time		15	GLOBAL_CONFIG
loop-protect	Loop protection configuration	15	INTERFACE_PORT_LIST
loop-protect action { [shutdown] [log] }*1		15	INTERFACE_PORT_LIST
no loop-protect action		15	INTERFACE_PORT_LIST
loop-protect tx-mode		15	INTERFACE_PORT_LIST
show loop-protect [interface <port_type_list>]		13	EXEC

mac address-table learning [secure]	Enable learning on port	15	INTERFACE_PORT_LIST
show mac address-table [conf | static | aging-time | { { learning | count } [interface <port_type_list>] } | { address <mac_addr> [vlan <vlan_id>] } | vlan <vlan_id> | interface <port_type_list>]		0	EXEC
clear mac address-table		15	EXEC
mac address-table static <mac_addr> vlan <vlan_id> interface <port_type_list>	Assign a static mac address to this port	15	GLOBAL_CONFIG
mac address-table aging-time <0,10-1000000>	Set switch aging time, 0 to disable.	15	GLOBAL_CONFIG
no mac address-table aging-time	Default aging time.	15	GLOBAL_CONFIG
monitor destination interface <port_type_id>	Sets monitor destination port.	15	GLOBAL_CONFIG
no monitor destination	Sets monitor destination port.	15	GLOBAL_CONFIG
monitor source { { interface <port_type_list> } | { cpu [<range_list>] } } { both | rx | tx }	Sets monitor source port(s).	15	GLOBAL_CONFIG
no monitor source { { interface <port_type_list> } | { cpu [<range_list>] } }	Sets monitor source port(s).	15	GLOBAL_CONFIG
debug chip [{ 0 | 1 | all }]		debug	EXEC
debug api [interface <port_type_list>] [{ ail | cil }] [{ init | misc | port | counters | phy | vlan | pvlan | mac-table | acl | qos | aggr | stp | mirror | evc | erps | eps | packet | fdma | ts | pts | wm | ipmc | stack | cmef | mplscore | mplsoam | vxlat | oam | sgpio | l3 | afi | macsec }] [full] [clear]		debug	EXEC
debug suspend		debug	EXEC
debug resume		debug	EXEC
debug kr-conf [cm1 <-32-31>] [c0 <-32-31>] [cp1 <-32-31>] [ampl <300-1275>] [{ ps25 | ps35 | ps55 | ps70 | ps120 }] [en-ob | dis-ob] [ser-inv | ser-no-inv]		debug	INTERFACE_PORT_LIST
show spanning-tree [summary | active | { interface <port_type_list> } | { detailed [interface <port_type_list>] } | { mst [configuration | { <0-7> [interface <port_type_list>] }] }]		15	EXEC
clear spanning-tree { { statistics [interface <port_type_list>] } | { detected-protocols		15	EXEC

[interface <port_type_list>] } }			
spanning-tree mode { stp | rstp | mstp }		15	GLOBAL_CONFIG
no spanning-tree mode		15	GLOBAL_CONFIG
spanning-tree transmit hold-count <1-10>		15	GLOBAL_CONFIG
no spanning-tree transmit hold-count		15	GLOBAL_CONFIG
spanning-tree mst max-hops <6-40>		15	GLOBAL_CONFIG
no spanning-tree mst max-hops		15	GLOBAL_CONFIG
spanning-tree mst max-age <6-40> [forward-time <4-30>]		15	GLOBAL_CONFIG
no spanning-tree mst max-age		15	GLOBAL_CONFIG
spanning-tree mst forward-time <4-30>		15	GLOBAL_CONFIG
no spanning-tree mst forward-time		15	GLOBAL_CONFIG
spanning-tree edge bpdu-filter		15	GLOBAL_CONFIG
spanning-tree edge bpdu-guard		15	GLOBAL_CONFIG
spanning-tree recovery interval <30-86400>		15	GLOBAL_CONFIG
no spanning-tree recovery interval		15	GLOBAL_CONFIG
spanning-tree mst <0-7> priority <0-61440>		15	GLOBAL_CONFIG
no spanning-tree mst <0-7> priority		15	GLOBAL_CONFIG
spanning-tree mst <0-7> vlan <vlan_list>		15	GLOBAL_CONFIG
no spanning-tree mst <0-7> vlan		15	GLOBAL_CONFIG
spanning-tree mst name <word32> revision <0-65535>		15	GLOBAL_CONFIG
no spanning-tree mst name		15	GLOBAL_CONFIG
spanning-tree		15	INTERFACE_PORT_LIST
spanning-tree edge		15	INTERFACE_PORT_LIST
spanning-tree auto-edge		15	INTERFACE_PORT_LIST
spanning-tree link-type { point-to-point | shared | auto }		15	INTERFACE_PORT_LIST
no spanning-tree link-type		15	INTERFACE_PORT_LIST
spanning-tree restricted-role		15	INTERFACE_PORT_LIST
spanning-tree restricted-tcn		15	INTERFACE_PORT_LIST
spanning-tree bpdu-guard		15	INTERFACE_PORT_LIST
spanning-tree mst <0-7> cost { <1-200000000> | auto }		15	INTERFACE_PORT_LIST
no spanning-tree mst <0-7> cost		15	INTERFACE_PORT_LIST

spanning-tree mst <0-7> port-priority <0-240>		15	INTERFACE_PORT_LIST
no spanning-tree mst <0-7> port-priority		15	INTERFACE_PORT_LIST
spanning-tree		15	STP_AGGR
spanning-tree edge		15	STP_AGGR
spanning-tree auto-edge		15	STP_AGGR
spanning-tree link-type { point-to-point | shared | auto }		15	STP_AGGR
no spanning-tree link-type		15	STP_AGGR
spanning-tree restricted-role		15	STP_AGGR
spanning-tree restricted-tcn		15	STP_AGGR
spanning-tree bpdu-guard		15	STP_AGGR
spanning-tree mst <0-7> cost { <1-200000000> | auto }		15	STP_AGGR
no spanning-tree mst <0-7> cost		15	STP_AGGR
spanning-tree mst <0-7> port-priority <0-240>		15	STP_AGGR
no spanning-tree mst <0-7> port-priority		15	STP_AGGR
mvr vlan <vlan_list> type { source | receiver }		15	INTERFACE_PORT_LIST
mvr name <word16> type { source | receiver }		15	INTERFACE_PORT_LIST
no mvr vlan <vlan_list> type		15	INTERFACE_PORT_LIST
no mvr name <word16> type		15	INTERFACE_PORT_LIST
mvr immediate-leave		15	INTERFACE_PORT_LIST
clear mvr [vlan <vlan_list> | name <word16>] statistics		15	EXEC
show mvr [vlan <vlan_list> | name <word16>] [group-database [interface <port_type_list>] [sfm-information]] [detail]		0	EXEC
mvr		15	GLOBAL_CONFIG
mvr vlan <vlan_list> [name <word16>]		15	GLOBAL_CONFIG
no mvr vlan <vlan_list>		15	GLOBAL_CONFIG
mvr vlan <vlan_list> mode { dynamic | compatible }		15	GLOBAL_CONFIG
mvr name <word16> mode { dynamic | compatible }		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> mode		15	GLOBAL_CONFIG
no mvr name <word16> mode		15	GLOBAL_CONFIG
mvr vlan <vlan_list> igmp-address <ipv4_ucast>		15	GLOBAL_CONFIG

mvr name <word16> igmp-address <ipv4_ucast>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> igmp-address		15	GLOBAL_CONFIG
no mvr name <word16> igmp-address		15	GLOBAL_CONFIG
mvr vlan <vlan_list> frame priority <0-7>		15	GLOBAL_CONFIG
mvr vlan <vlan_list> frame tagged		15	GLOBAL_CONFIG
mvr name <word16> frame priority <0-7>		15	GLOBAL_CONFIG
mvr name <word16> frame tagged		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> frame priority		15	GLOBAL_CONFIG
no mvr name <word16> frame priority		15	GLOBAL_CONFIG
mvr vlan <vlan_list> last-member-query-interval <0-31744>		15	GLOBAL_CONFIG
mvr name <word16> last-member-query-interval <0-31744>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> last-member-query-interval		15	GLOBAL_CONFIG
no mvr name <word16> last-member-query-interval		15	GLOBAL_CONFIG
mvr vlan <vlan_list> channel <word16>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> channel		15	GLOBAL_CONFIG
no mvr name <word16> channel		15	GLOBAL_CONFIG
show dot1x statistics { eapol | radius | all} [interface <port_type_list>]	Shows statistics for either eapol or radius.	0	EXEC
show dot1x status [interface <port_type_list>] [brief]	Shows dot1x status, such as admin state, port state and last source.	0	EXEC
clear dot1x statistics [interface <port_type_list>]	Clears the statistics counters	15	EXEC
dot1x re-authentication	Set Re-authentication state	15	GLOBAL_CONFIG
dot1x authentication timer re-authenticate <1-3600>	The period between re-authentication attempts in seconds	15	GLOBAL_CONFIG
no dot1x authentication timer re-authenticate		15	GLOBAL_CONFIG
dot1x timeout tx-period <1-65535>	the time between EAPOL retransmissions.	15	GLOBAL_CONFIG
no dot1x timeout tx-period		15	GLOBAL_CONFIG
dot1x authentication timer inactivity <10-1000000>	Time in seconds between check for activity on successfully authenticated MAC addresses.	15	GLOBAL_CONFIG

no dot1x authentication timer inactivity		15	GLOBAL_CONFIG
dot1x timeout quiet-period <10-1000000>	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.	15	GLOBAL_CONFIG
no dot1x timeout quiet-period		15	GLOBAL_CONFIG
dot1x re-authenticate	Refresh (restart) 802.1X authentication process.	15	INTERFACE_PORT_LIST
dot1x initialize [interface <port_type_list>]	Force re-authentication immediately	15	EXEC
dot1x system-auth-control	Set the global NAS state	15	GLOBAL_CONFIG
dot1x port-control { force-authorized | force-unauthorized | auto | single | multi | mac-based }	Sets the port security state.	15	INTERFACE_PORT_LIST
no dot1x port-control	Sets the port security state.	15	INTERFACE_PORT_LIST
dot1x guest-vlan	Enables/disables guest VLAN	15	INTERFACE_PORT_LIST
dot1x max-reauth-req <1-255>	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN	15	GLOBAL_CONFIG
no dot1x max-reauth-req	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN	15	GLOBAL_CONFIG
dot1x guest-vlan <1-4095>	Guest VLAN ID used when entering the Guest VLAN.	15	GLOBAL_CONFIG
no dot1x guest-vlan	Guest VLAN ID used when entering the Guest VLAN.	15	GLOBAL_CONFIG
dot1x guest-vlan supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest VLAN, it will first check if this option is enabled or disabled. If disabled (unchecked; default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port	15	GLOBAL_CONFIG

	for the life-time of the port. If enabled (checked), the switch will consider entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.		
dot1x radius-qos	Enables/disables per-port state of RADIUS-assigned QoS.	15	INTERFACE_PORT_LIST
dot1x radius-vlan	Enables/disables per-port state of RADIUS-assigned VLAN.	15	INTERFACE_PORT_LIST
dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }*1	Globally enables/disables a dot1x feature functionality	15	GLOBAL_CONFIG
show dot1x statistics { eapol | radius | all} [interface <port_type_list>]	Shows statistics for either eapol or radius.	0	EXEC
ntp	Enable NTP	13	GLOBAL_CONFIG
ntp server <1-5> ip-address {<ipv4_ucast>|<ipv6_ucast>|<hostname>}		13	GLOBAL_CONFIG
ntp server <1-5> ip-address {<ipv4_ucast>|<hostname>}		13	GLOBAL_CONFIG
no_ntp_server_ip_address		13	GLOBAL_CONFIG
show ntp status		13	EXEC
show platform phy [interface <port_type_list>]	Show PHY module's information for all or a given interface	15	EXEC
show platform phy id [interface <port_type_list>]	Platform PHY's IDs	15	EXEC
show platform phy instance		15	EXEC
show platform phy failover		15	EXEC
platform phy instance restart { cool | warm }		15	EXEC
platform phy instance default-activate		15	EXEC
show platform phy status [interface <port_type_list>]		15	EXEC
no platform phy instance		15	GLOBAL_CONFIG
platform phy failover		15	INTERFACE_PORT_LIST
debug phy read [<0~31>] [<0-0xffff>] [addr-sort]		debug	INTERFACE_PORT_LIST
debug phy write [<0~31>] <0-0xffff> [<0-0xffff>]		debug	INTERFACE_PORT_LIST
debug phy do-page-chk [enable|disable]		debug	EXEC

debug phy force-pass-through-speed {1G | 100M | 10M}		debug	INTERFACE_PORT_LIST
debug phy reset		debug	INTERFACE_PORT_LIST
debug phy gpio <0-13> mode {output|input|alternative}		debug	INTERFACE_PORT_LIST
debug phy gpio <0-13> get		debug	INTERFACE_PORT_LIST
show poe [interface <port_type_list>]	Use the show poe to show PoE status.	0	EXEC
poe mode { standard | plus }	Use poe mode to configure of PoE mode.	15	INTERFACE_PORT_LIST
no poe mode	Use poe mode to configure of PoE mode.	15	INTERFACE_PORT_LIST
poe priority { low | high | critical }	Use poe priority to configure PoE priority.	15	INTERFACE_PORT_LIST
no poe priority	Use poe priority to configure PoE priority.	15	INTERFACE_PORT_LIST
poe management mode { class-consumption | class-reserved-power | allocation-consumption | allocation-reserved-power | lldp-consumption | lldp-reserved-power }	Use management mode to configure PoE power management method.	15	GLOBAL_CONFIG
no poe management mode		15	GLOBAL_CONFIG
poe power limit { <fword2.1> }	Use poe power limit to configure the maximum allowed power for the interface when power management is in allocation mode.	15	INTERFACE_PORT_LIST
no poe power limit	Use poe power limit to configure the maximum allowed power for the interface when power management is in allocation mode.	15	INTERFACE_PORT_LIST
poe supply sid <1~16> <1-2000>	Use poe supply to specify the maximum power the power supply can deliver.	15	GLOBAL_CONFIG
no poe supply [sid <1~16>]		15	GLOBAL_CONFIG
poe schedule-mode	Configure PoE Schedule mode.	15	INTERFACE_PORT_LIST
no poe schedule-mode	disable PoE power management method.	15	INTERFACE_PORT_LIST
poe select-all <range_list>	Configure PoE Schedule mode.	15	GLOBAL_CONFIG

no poe schedule-all <range_list>	disable PoE power management method.	15	GLOBAL_CONFIG
poe delay-mode <range_list>	Configure PoE Power Delay mode.	15	GLOBAL_CONFIG
no poe delay-mode <range_list>		15	GLOBAL_CONFIG
poe delay-time <range_list> <0-300>	Configure PoE Power Delay time.	15	GLOBAL_CONFIG
poe hour <0-23>	This command is used to set hour time per week to enable PoE.	15	INTERFACE_PORT_LIST
no poe hour <0-23>	This command is used to set hour time per week to disable PoE.	15	INTERFACE_PORT_LIST
poe Sun	This command is used to set hour time on Sunday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Sun	This command is used to set hour time on Sunday to disble PoE.	15	INTERFACE_PORT_LIST
poe Mon	This command is used to set hour time on Monday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Mon	This command is used to set hour time on Monday to disable PoE.	15	INTERFACE_PORT_LIST
poe Tue	This command is used to set hour time on Tuesday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Tue	This command is used to set hour time on Tuesday to disable PoE.	15	INTERFACE_PORT_LIST
poe Wed	This command is used to set hour time on Wednesday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Wed	This command is used to set hour time on Wednesday to disable PoE.	15	INTERFACE_PORT_LIST
poe Thr	This command is used to set hour time on Thursday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Thr	This command is used to set hour time on Thursday to enable PoE.	15	INTERFACE_PORT_LIST
poe Fri	This command is used to set hour time on Friday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Fri	This command is used to set hour time on Friday to disable PoE.	15	INTERFACE_PORT_LIST
poe Sat	This command is used to set hour time on Saturday to enable PoE.	15	INTERFACE_PORT_LIST

no poe Sat	This command is used to set hour time on Saturday to disable PoE.	15	INTERFACE_PORT_LIST
show interface <port_type_list> statistics [{ packets | bytes | errors | discards | filtered | { priority [<0~7>] } }] [{ up | down }]	Shows the statistics for the interface.	0	EXEC
show interface <port_type_list> veriphy	Run and display cable diagnostics.	0	EXEC
clear statistics [interface] <port_type_list>	Clears the statistics for the interface.	0	EXEC
show interface <port_type_list> capabilities		0	EXEC
show interface <port_type_list> status	Display status for the interface.	0	EXEC
mtu <'VTSS_MAX_FRAME_LENGTH_STANDARD'-'VTSS_MAX_FRAME_LENGTH_MAX'>	Use mtu to specify maximum frame size (1518-9600 bytes).	15	INTERFACE_PORT_LIST
no mtu	Use no mtu to set maximum frame size to default.	15	INTERFACE_PORT_LIST
shutdown	Use shutdown to shutdown the interface.	15	INTERFACE_PORT_LIST
speed {2500 | 1000 | 100 | 10 | auto {[10] [100] [1000]} }	Configures interface speed. If you use 10, 100, or 1000 keywords with the auto keyword the port will only advertise the specified speeds.	15	INTERFACE_PORT_LIST
no speed	Use "no speed" to configure interface to default speed.	15	INTERFACE_PORT_LIST
duplex { half | full | auto [half | full] }	Use duplex to configure interface duplex mode.	15	INTERFACE_PORT_LIST
no duplex	Use "no duplex" to set duplex to default.	15	INTERFACE_PORT_LIST
media-type { rj45 | sfp | dual }	Use media-type to configure the interface media type.	15	INTERFACE_PORT_LIST
no media-type	Use to configure the interface media-type type to default.	15	INTERFACE_PORT_LIST
flowcontrol { on | off }	Use flowcontrol to configure flow control for the interface.	15	INTERFACE_PORT_LIST
no flowcontrol	Use no flowcontrol to set flow control to default.	15	INTERFACE_PORT_LIST
excessive-restart	Use excessive-restart to configure backoff algorithm in half duplex mode.	15	INTERFACE_PORT_LIST

show web privilege group [<cword>] level		0	EXEC
web privilege group <cword> level { [cro <0-15>] [crw <0-15>] [sro <0-15>] [srw <0-15>] }*1		15	GLOBAL_CONFIG
no web privilege group [<cword>] level		15	GLOBAL_CONFIG
show port-security port [interface <port_type_list>]	Show MAC Addresses learned by Port Security	0	EXEC
show port-security switch [interface <port_type_list>]	Show Port Security status.	0	EXEC
no port-security shutdown [interface <port_type_list>]	Reopen one or more ports whose limit is exceeded and shut down.	15	EXEC
port-security	Enable/disable port security globally.	15	GLOBAL_CONFIG
port-security aging	Enable/disable port security aging.	15	GLOBAL_CONFIG
port-security aging time <10-10000000>	Time in seconds between check for activity on learned MAC addresses.	15	GLOBAL_CONFIG
no port-security aging time		15	GLOBAL_CONFIG
port-security	Enable/disable port security per interface.	15	INTERFACE_PORT_LIST
port-security maximum [<1-1024>]	Maximum number of MAC addresses that can be learned on this set of interfaces.	15	INTERFACE_PORT_LIST
no port-security maximum		15	INTERFACE_PORT_LIST
port-security violation { protect | trap | trap-shutdown | shutdown }	The action involved with exceeding the limit.	15	INTERFACE_PORT_LIST
no port-security violation	The action involved with exceeding the limit.	15	INTERFACE_PORT_LIST
pvlan <range_list>	Use the pvlan add or remove command to add or remove a port from a PVLAN.	13	INTERFACE_PORT_LIST
pvlan isolation	Use the pvlan isolation command to add the port into an isolation group.	13	INTERFACE_PORT_LIST
show pvlan [<range_list>]	Use the show pvlan command to view the PVLAN configuration.	13	EXEC
show pvlan isolation [interface <port_type_list>]	Use the show pvlan isolation command to view the PVLAN isolation configuration.	13	EXEC
show qos [{ interface [<port_type_list>] } | wred |		15	EXEC

{ maps [dscp-cos] [dscp-ingress-translation] [dscp-classify] [cos-dscp] [dscp-egress-translation] } | storm | { qce [<1-256>] }]			
qos map dscp-cos { <0~63> | <dscp> } cos <0-7> dpl <dpl>		15	GLOBAL_CONFIG
no qos map dscp-cos { <0~63> | <dscp> }		15	GLOBAL_CONFIG
qos map dscp-ingress-translation { <0~63> | <dscp> } to { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map dscp-ingress-translation { <0~63> | <dscp> }		15	GLOBAL_CONFIG
qos map dscp-classify { <0~63> | <dscp> }		15	GLOBAL_CONFIG
qos map cos-dscp <0~7> dpl <0~1> dscp { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map cos-dscp <0~7> dpl <0~1>		15	GLOBAL_CONFIG
qos map dscp-egress-translation { <0~63> | <dscp> } <0~1> to { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map dscp-egress-translation { <0~63> | <dscp> } <0~1>		15	GLOBAL_CONFIG
qos wred queue <0~5> min-th <0-100> mdp-1 <0-100> mdp-2 <0-100> mdp-3 <0-100>		15	GLOBAL_CONFIG
qos wred queue <0~5> min-fl <0-100> max <1-100> [fill-level]		15	GLOBAL_CONFIG
no qos wred queue <0~5>		15	GLOBAL_CONFIG
qos storm { unicast | multicast | broadcast } { { <1,2,4,8,16,32,64,128,256,512> [kfps] } | { 1024 kfps } }		15	GLOBAL_CONFIG
no qos storm { unicast | multicast | broadcast }		15	GLOBAL_CONFIG
qos qce { [update] } <uint> [{ next <uint> } | last] [interface <port_type_list>] [smac { <mac_addr> | <oui> | any }] [dmac { <mac_addr> | unicast | multicast | broadcast | any }] [tag { [type { untagged | tagged | c-tagged | s-tagged | any }] [vid { <vcap_vr> | any }] [pcp { <pcp> | any }] [dei { <0-1> | any }] }*1] [inner-tag { [type		15	GLOBAL_CONFIG

{ untagged | tagged | c-tagged | s-tagged | any } [vid { <vcap_vr> | any }] [pcp { <pcp> | any }] [dei { <0-1> | any }] }*1] [frame-type { any | { etype [{ <0x600-0x7ff,0x801-0x86dc,0x86de-0xffff> | any }] } | { llc [dsap { <0-0xff> | any }] [ssap { <0-0xff> | any }] [control { <0-0xff> | any }] } | { snap [{ <0-0xffff> | any }] } | { ipv4 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [dip { <ipv4_subnet> | any }] [dscp { <vcap_vr> | <dscp> | any }] [fragment { yes | no | any }] [sport { <vcap_vr> | any }] [dport { <vcap_vr> | any }] } | { ipv6 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [dip { <ipv4_subnet> | any }] [dscp { <vcap_vr> | <dscp> | any }] [sport { <vcap_vr> | any }] [dport { <vcap_vr> | any }] } }] [action { [cos { <0-7> | default }] [dpl { <0-1> | default }] [pcp-dei { <0-7> <0-1> | default }] [dscp { <0-63> | <dscp> | default }] [policy { <uint> | default }] }*1]			
no qos qce <'QCE_ID_START'~'QCE_ID_END'>		15	GLOBAL_CONFIG
qos qce refresh		15	GLOBAL_CONFIG
qos cos <0-7>		15	GLOBAL_CONFIG
no qos cos		15	INTERFACE_PORT_LIST
qos dpl <dpl>		15	INTERFACE_PORT_LIST
no qos dpl		15	INTERFACE_PORT_LIST
qos pcp <0-7>		15	INTERFACE_PORT_LIST
no qos pcp		15	INTERFACE_PORT_LIST
qos dei <0-1>		15	INTERFACE_PORT_LIST
no qos dei		15	INTERFACE_PORT_LIST
qos trust tag		15	INTERFACE_PORT_LIST
qos trust dscp		15	INTERFACE_PORT_LIST
qos map tag-cos pcp <0~7> dei <0~1> cos <0-7> dpl <dpl>		15	INTERFACE_PORT_LIST
no qos map tag-cos pcp <0~7> dei <0~1>		15	INTERFACE_PORT_LIST

qos policer <uint> [fps] [flowcontrol]		15	INTERFACE_PORT_LIST
no qos policer		15	INTERFACE_PORT_LIST
qos queue-policer queue <0~7> <uint>		15	INTERFACE_PORT_LIST
qos queue-policer queue <0~7> <uint>		15	INTERFACE_PORT_LIST
no qos queue-policer queue <0~7>		15	INTERFACE_PORT_LIST
qos wrr <1-100> <1-100> <1-100> <1-100> <1-100> <1-100>		15	INTERFACE_PORT_LIST
no qos wrr		15	INTERFACE_PORT_LIST
qos shaper <uint>		15	INTERFACE_PORT_LIST
no qos shaper		15	INTERFACE_PORT_LIST
qos queue-shaper queue <0~7> <uint> [excess]		15	INTERFACE_PORT_LIST
no qos queue-shaper queue <0~7>		15	INTERFACE_PORT_LIST
qos tag-remark { pcp <0-7> dei <0-1> | mapped }		15	INTERFACE_PORT_LIST
no qos tag-remark		15	INTERFACE_PORT_LIST
qos map cos-tag cos <0~7> dpl <0~1> pcp <0-7> dei <0-1>		15	INTERFACE_PORT_LIST
no qos map cos-tag cos <0~7> dpl <0~1>		15	INTERFACE_PORT_LIST
qos dscp-translate		15	INTERFACE_PORT_LIST
qos dscp-classify { zero | selected | any }		15	INTERFACE_PORT_LIST
no qos dscp-classify		15	INTERFACE_PORT_LIST
qos dscp-remark { rewrite | remap | remap-dp }		15	INTERFACE_PORT_LIST
no qos dscp-remark		15	INTERFACE_PORT_LIST
qos storm { unicast | broadcast | unknown } <100-13200000> [fps]		15	INTERFACE_PORT_LIST
no qos storm { unicast | broadcast | unknown }		15	INTERFACE_PORT_LIST
qos qce { [addr { source | destination }] [key { double-tag | normal | ip-addr | mac-ip-addr }] }*1		15	INTERFACE_PORT_LIST
no qos qce { [addr] [key] }*1		15	INTERFACE_PORT_LIST
debug qos shaper cir { <100-3300000> [cbs <4096-258048>] } { [eir <100-3300000> [ebs <4096-258048>]] }		debug	INTERFACE_PORT_LIST
no debug qos shaper		debug	INTERFACE_PORT_LIST
debug qos queue-shaper queue <0~7> { cir <100-3300000> [cbs <4096-258048>] } { [eir <100-3300000> [ebs <4096-258048>]] }		debug	INTERFACE_PORT_LIST

[excess]			
no debug qos queue-shaper queue <0~7>		debug	INTERFACE_PORT_LIST
debug show qos shapers		debug	EXEC
debug qos cmef [{ enable | disable }]		debug	EXEC
show rmon statistics [<1~65535>]		15	EXEC
show rmon history [<1~65535>]		15	EXEC
show rmon alarm [<1~65535>]		15	EXEC
show rmon event [<1~65535>]		15	EXEC
rmon alarm <1-65535> <word255> <1-2147483647> {absolute | delta} rising-threshold <-2147483648-2147483647> [<0-65535>] falling-threshold <-2147483648-2147483647> [<0-65535>] {[rising | falling | both]}		15	GLOBAL_CONFIG
no rmon alarm <1-65535>		15	GLOBAL_CONFIG
rmon event <1-65535> [log] [trap <word127>] {[description <line127>]}		15	GLOBAL_CONFIG
no rmon event <1-65535>		15	GLOBAL_CONFIG
rmon collection stats <1-65535>		15	INTERFACE_PORT_LIST
no rmon collection stats <1-65535>		15	INTERFACE_PORT_LIST
rmon collection history <1-65535> [buckets <1-65535>] [interval <1-3600>]		15	INTERFACE_PORT_LIST
no rmon collection history <1-65535>		15	INTERFACE_PORT_LIST
show sflow statistics { receiver [<range_list>] | samplers [interface [<range_list>] <port_type_list>]}	Use sflow statistics to show statistics for either receiver or sample interface.	0	EXEC
show sflow	Use show sflow to display the current sFlow configuration.	0	EXEC
clear sflow statistics { receiver [<range_list>] | samplers [interface [<range_list>] <port_type_list>] }	Clearing statistics.	15	EXEC
sflow agent-ip {ipv4 <ipv4_addr> | ipv6 <ipv6_addr>}	The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address.	15	GLOBAL_CONFIG
no sflow agent-ip	Sets the agent IP address used as agent-address in UDP datagrams to	15	GLOBAL_CONFIG

	127.0.0.1.		
sflow timeout [receiver <range_list>] <0-2147483647>	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.	15	GLOBAL_CONFIG
no sflow timeout [receiver <range_list>]	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.	15	GLOBAL_CONFIG
sflow collector-address [receiver <range_list>] [<word>]	Collector address	15	GLOBAL_CONFIG
no sflow collector-address [receiver <range_list>]		15	GLOBAL_CONFIG
sflow collector-port [receiver <range_list>] <1-65535>	Collector UDP port. Valid range is 0-65536.	15	GLOBAL_CONFIG
no sflow collector-port [receiver <range_list>]	Collector UDP port. Valid range is 0-65536.	15	GLOBAL_CONFIG
sflow max-datagram-size [receiver <range_list>] <200-1468>	Maximum datagram size.	15	GLOBAL_CONFIG
no sflow max-datagram-size [receiver <range_list>]	Maximum datagram size.	15	GLOBAL_CONFIG
sflow sampling-rate [sampler <range_list>] [<1-4294967295>]	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.	15	INTERFACE_PORT_LIST
sflow max-sampling-size [sampler <range_list>] [<14-200>]	Specifies the maximum number of bytes to transmit per flow sample.	15	INTERFACE_PORT_LIST

no sflow max-sampling-size [sampler <range_list>]	Specifies the maximum number of bytes to transmit per flow sample.	15	INTERFACE_PORT_LIST
sflow counter-poll-interval [sampler <range_list>] [<1-3600>]	The interval - in seconds - between counter poller samples.	15	INTERFACE_PORT_LIST
no sflow counter-poll-interval [<range_list>]	The interval - in seconds - between counter poller samples.	15	INTERFACE_PORT_LIST
sflow [<range_list>]	Enables/disables flow sampling on this port.	15	INTERFACE_PORT_LIST
show smtp	Email information	0	EXEC
smtp delete { server | username | sender | returnpath | mailaddress <1-6> }	Delete email server	15	GLOBAL_CONFIG
smtp mailaddress <1-6> <word47>	Set email server	15	GLOBAL_CONFIG
smtp returnpath <word47>		15	GLOBAL_CONFIG
smtp returnpath <word47>		15	GLOBAL_CONFIG
smtp sender <word47>		15	GLOBAL_CONFIG
smtp username <word31> <word31>		15	GLOBAL_CONFIG
smtp server <word47>		15	GLOBAL_CONFIG
smtp level <0-7>		15	GLOBAL_CONFIG
show snmp		15	EXEC
show snmp community v3 [<word127>]		15	EXEC
show snmp user [<word32> <word10-32>]			
show snmp security-to-group [{ v1 | v2c | v3 } <word32>]			
show snmp access [<word32> { v1 | v2c | v3 | any } { auth | noauth | priv }]			
show snmp view [<word32> <word255>]			
snmp-server	Enable SNMP server.	13	GLOBAL_CONFIG
snmp-server engine-id local <word10-32>	To specify SNMP server's engine ID.	13	GLOBAL_CONFIG
no snmp-server engined-id local	To set SNMP server's engine ID to default value.	15	GLOBAL_CONFIG
snmp-server version { v1 | v2c | v3 }	Set the SNMP server version to SNMPv1, SNMPv2c or SNMPv3.	15	GLOBAL_CONFIG
no snmp-server version	Set SNMP server's version to default setting.	15	GLOBAL_CONFIG
snmp-server community v2c <word127> [ro | rw]		15	GLOBAL_CONFIG

snmp-server community v3 <word127> [<ipv4_addr> <ipv4_netmask>]		15	GLOBAL_CONFIG
no snmp-server community v2c		15	GLOBAL_CONFIG
no snmp-server community v3 <word127>		15	GLOBAL_CONFIG
snmp-server user <word32> engine-id <word10-32> [{md5 <word8-32> | sha <word8-40> } [priv { des | aes } <word8-32>]]		15	GLOBAL_CONFIG
no snmp-server user <word32> engine-id <word10-32>		15	GLOBAL_CONFIG
snmp-server security-to-group model { v1 | v2c | v3 } name <word32> group <word32>		15	GLOBAL_CONFIG
no snmp-server security-to-group model { v1 | v2c | v3 } name <word32>		15	GLOBAL_CONFIG
snmp-server access <word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv } [read <word255>] [write <word255>]		15	GLOBAL_CONFIG
no snmp-server access <word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv }		15	GLOBAL_CONFIG
snmp-server view <word32> <word255> { include | exclude }		15	GLOBAL_CONFIG
no snmp-server view <word32> <word255>		15	GLOBAL_CONFIG
snmp-server contact <line255>	To specify the system contact string.	15	GLOBAL_CONFIG
no snmp-server contact	To clear the system contact string.	15	GLOBAL_CONFIG
snmp-server location <line255>	To specify the system location string.	15	GLOBAL_CONFIG
no snmp-server location	To specify the system location string.	15	GLOBAL_CONFIG
show snmp mib context	Use the show snmp mib context user EXEC command to display \ the supported MIBs in the switch.	15	EXEC
show snmp mib ifmib ifIndex	Use the show snmp mib ifmib ifIndex user EXEC command to \ display the SNMP ifIndex(defined in IF-MIB) mapping \ information in the switch.	15	EXEC

show snmp mib redefine	Use the show snmp mib redefine user EXEC command to display \ the redefined MIBs in the switch, that are different \ definitions from the standard MIBs.	15	EXEC
snmp-server trap		15	GLOBAL_CONFIG
no snmp-server host <word32>		15	GLOBAL_CONFIG
shutdown		15	SNMPS_HOST
host { <ipv4_ucast> | <hostname> } [<1-65535>] [traps | informs]		15	SNMPS_HOST
host <ipv6_ucast> [<1-65535>] [traps | informs]		15	SNMPS_HOST
no host		15	SNMPS_HOST
version { v1 [<word127>] | v2 [<word127>] | v3 [probe | engineID <word10-32>] [<word32>] }		15	SNMPS_HOST
no version		15	SNMPS_HOST
informs retries <0-255> timeout <0-2147>		15	SNMPS_HOST
no informs		15	SNMPS_HOST
traps [aaa authentication] [system [coldstart] [warmstart]] [switch [stp] [rmon]]		15	SNMPS_HOST
no traps		15	SNMPS_HOST
snmp-server host <word32> traps [linkup] [linkdown] [lldp]		15	INTERFACE_PORT_LIST
no snmp-server host <word32> traps		15	INTERFACE_PORT_LIST
show snmp host [<word32>] [system] [switch] [interface] [aaa]		15	EXEC
switch stack re-elect	Config commands for the switches in the stack	13	EXEC
switch stack priority {local | <1-16>} <1-4>	Configure master election priority	13	GLOBAL_CONFIG
switch stack swap <1-16> <1-16>	Swap switch ID	13	GLOBAL_CONFIG
no switch stack <1-16>		13	GLOBAL_CONFIG
switch stack <1-16> mac <mac_ucast>	MAC address of the switch	13	GLOBAL_CONFIG
switch stack { enable | disable }	Enable/disable stacking	13	GLOBAL_CONFIG
switch stack interface <port_type_list>	Configure stacking interface	13	GLOBAL_CONFIG
show switch stack [details]	Show switch Detail information	0	EXEC

show switch stack debug	Show switch Debug information	debug	EXEC
show ip ssh	Use the show ip ssh privileged EXEC \ command to display the SSH status.	15	EXEC
ip ssh	Use the ip ssh global configuration command to \ enable the SSH. Use the no form of this \ command to disable the SSH.	15	GLOBAL_CONFIG
show network-clock	Show selector state.	0	EXEC
clear network-clock clk-source <range_list>	Clear active WTR timer.	15	EXEC
network-clock clk-source <range_list> nominate { clk-in | {interface <port_type_id>} }	Nominate a clk input to become a selectable clock source.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> nominate		15	GLOBAL_CONFIG
network-clock input-source { 1544khz | 2048khz | 10mhz }	Sets the station clock input frequency	15	GLOBAL_CONFIG
no network-clock input-source		15	GLOBAL_CONFIG
network-clock output-source { 1544khz | 2048khz | 10mhz }	Sets the station clock output frequency	15	GLOBAL_CONFIG
no network-clock output-source		15	GLOBAL_CONFIG
network-clock clk-source <range_list> aneg-mode { master | slave | forced}	Sets the preferred negotiation.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> aneg-mode		15	GLOBAL_CONFIG
network-clock clk-source <range_list> hold-timeout <3-18>	The hold off timer value in 100 ms.Valid values are range 3-18.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> hold-timeout		15	GLOBAL_CONFIG
network-clock selector { { manual clk-source <uint> } | selected | nonrevertive | revertive | holdover | freerun }	Selection mode of nominated clock sources	15	GLOBAL_CONFIG
no network-clock selector		15	GLOBAL_CONFIG
network-clock clk-source <range_list> priority	Priority of nominated clock sources.	15	GLOBAL_CONFIG

<0-1>			
no network-clock clk-source <range_list> priority		15	GLOBAL_CONFIG
network-clock wait-to-restore <0-12>	WTR time (0-12 min) '0' is disable	15	GLOBAL_CONFIG
no network-clock wait-to-restore		15	GLOBAL_CONFIG
network-clock ssm-holdover { prc | ssua | ssub | eec2 | eec1 | dnu | inv }	Hold Over SSM overwrite	15	GLOBAL_CONFIG
no network-clock ssm-holdover		15	GLOBAL_CONFIG
network-clock ssm-freerun { prc | ssua | ssub | eec2 | eec1 | dnu | inv }	Free Running SSM overwrite	15	GLOBAL_CONFIG
no network-clock ssm-freerun		15	GLOBAL_CONFIG
network-clock clk-source <range_list> ssm-overwrite { prc | ssua | ssub | eec2 | eec1 | dnu }	Clock source SSM overwrite	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> ssm-overwrite		15	GLOBAL_CONFIG
network-clock option { eec1 | eec2 }	EEC options	15	GLOBAL_CONFIG
no network-clock option		15	GLOBAL_CONFIG
network-clock synchronization ssm	SSM enable/disable.	15	INTERFACE_PORT_LIST
show logging [info] [warning] [error] [switch <switch_list>]	Use the show logging privileged EXEC command without keywords to display the logging configuration, or particularly the logging message summary for the logging level.	15	EXEC
show logging <1-4294967295> [switch <switch_list>]	Use the show logging privileged EXEC command with logging ID to display the detail logging message. OC_CMD_DEFAULT =	15	EXEC
clear logging [info] [warning] [error] [switch <switch_list>]	Use the clear logging privileged EXEC command to clear the logging message.	15	EXEC
logging on	Use the logging on global configuration command to enable the logging server. Use the no form of this command to disable the logging server.	15	GLOBAL_CONFIG
logging host { <ipv4_ucast> | <hostname> }	Use the logging host global configuration command to configure the	15	GLOBAL_CONFIG

	host address of logging server.		
no logging host	Use the no logging host global configuration command to clear the host address of logging server.	15	GLOBAL_CONFIG
logging level { info | warning | error }	Use the logging level global configuration command to configure what level of message will send to logging server.	15	GLOBAL_CONFIG
show clock	Show running system information	0	EXEC
show version	System hardware and software status	0	EXEC
password unencrypted <line31>	Use the password encrypted <password> global configuration command to configure administrator password with unencrypted password for the local switch access.	15	GLOBAL_CONFIG
password encrypted <word4-44>	Use the password encrypted <password> global configuration command to configure administrator password with encrypted password for the local switch access.	15	GLOBAL_CONFIG
password none	Use the password none global configuration command to remove the administrator password.	15	GLOBAL_CONFIG
show system	Show system information	0	EXEC
system contact <line255>	To specify the system contact string.	15	GLOBAL_CONFIG
no system contact	To clear the system contact string.	15	GLOBAL_CONFIG
system location <line255>	To specify the system location string.	15	GLOBAL_CONFIG
no system location	To specify the system location string.	15	GLOBAL_CONFIG
system name <line255>	To specify the system mode name string.	15	GLOBAL_CONFIG
no system name	To specify the system model name string.	15	GLOBAL_CONFIG
show thermal-protect [interface <port_type_list>]	Shows thermal protection status (chip temperature and port status).	15	EXEC
thermal-protect prio <0~3> temperature <0-255>	Thermal protection configuirations.	15	GLOBAL_CONFIG

no thermal-protect prio <0~3>	Sets temperature at which to turn ports with the corresponding priority off.	15	GLOBAL_CONFIG
thermal-protect port-prio <0-3>	Sets temperature at which to turn ports with the corresponding priority off.	15	INTERFACE_PORT_LIST
no thermal-protect port-prio	Sets temperature at which to turn ports with the corresponding priority off.	15	INTERFACE_PORT_LIST
show upnp		15	EXEC
upnp		15	GLOBAL_CONFIG
upnp ttl <1-255>		15	GLOBAL_CONFIG
no upnp ttl		15	GLOBAL_CONFIG
upnp advertising-duration <100-86400>		15	GLOBAL_CONFIG
no upnp advertising-duration		15	GLOBAL_CONFIG
username <word31> privilege <0-15> password unencrypted <line31>	Use the username <username> privilege <level> password encrypted <password> global configuration command to add a user with unencrypted password for the local switch access.	15	GLOBAL_CONFIG
username <word31> privilege <0-15> password encrypted <word4-44>	Use the username <username> privilege <level> password encrypted <password> global configuration command to add a user with encrypted password for the local switch access.	15	GLOBAL_CONFIG
username <word31> privilege <0-15> password none	Use the username <username> privilege <level> password none global configuration command to remove the password for specific username.	15	GLOBAL_CONFIG
no username <word31>	Use the no username <username> global configuration command to delete a local user.	15	GLOBAL_CONFIG
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>		13	GLOBAL_CONFIG
switchport vlan mac <mac_ucast> vlan <vlan_id>	Use the switchport vlan mac command	13	INTERFACE_PORT_LIST

	to associate a MAC address to VLAN ID.		
switchport vlan protocol group <word16> vlan <vlan_id>	Use the no form of this command to remove the group to vlan mapping.	13	INTERFACE_PORT_LIST
show vlan protocol [eth2 {<0x600-0xffff>|arp|ip|ipx|at}] [snap {<0x0-0xffffff>|rfc-1042|snap-8021h} <0x0-0xffff>] [llc <0x0-0xff> <0x0-0xff>]	Use the switchport vlan protocol group command to add group to vlan mapping.	13	EXEC
show vlan mac [address <mac_ucast>]		13	EXEC
show vlan ip-subnet [id <1-128>]		13	EXEC
switchport vlan ip-subnet id <1-128> <ipv4_subnet> vlan <vlan_id>		13	INTERFACE_PORT_LIST
no switchport vlan ip-subnet id <1~128>		13	INTERFACE_PORT_LIST
debug vcl policy <uint>		debug	INTERFACE_PORT_LIST
no debug vcl policy		debug	GLOBAL_CONFIG
debug show vcl policy		debug	EXEC
switchport mode {access | trunk | hybrid}	Use the switchport mode command to define the type of the port.	13	INTERFACE_PORT_LIST
no switchport mode		13	INTERFACE_PORT_LIST
switchport access vlan <vlan_id>	Use the switchport access vlan command to configure a port to a VLAN. Valid VLAN IDs are 1 to 4095.	13	INTERFACE_PORT_LIST
no switchport access vlan		13	INTERFACE_PORT_LIST
switchport trunk native vlan <vlan_id>	Use the switchport native vlan command to configure a port VLAN ID for a trunk port.	13	INTERFACE_PORT_LIST
no switchport trunk native vlan	Set trunk mode characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid native vlan <vlan_id>	Use the switchport native vlan command to configure a port VLAN ID for a hybrid port.	13	INTERFACE_PORT_LIST
no switchport hybrid native vlan	Set hybrid mode characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid port-type { unaware | c-port | s-port | s-custom-port }	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST

no switchport hybrid port-type	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid ingress-filtering	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid acceptable-frame-type { all | tagged | untagged }	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid acceptable-frame-type	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid egress-tag {none | all [except-native]}	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid egress-tag	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport trunk vlan tag native	Set trunk characteristics of the interface	13	INTERFACE_PORT_LIST
switchport trunk allowed vlan {all | none | [add | remove | except] <vlan_list>}	Set trunk mode characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport trunk allowed vlan	Set trunk characteristics of the interface,	13	INTERFACE_PORT_LIST
switchport hybrid allowed vlan {all | none | [add | remove | except] <vlan_list>}	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid allowed vlan	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
vlan ethertype s-custom-port <0x0600-0xffff>		13	GLOBAL_CONFIG
no vlan {{ethertype s-custom-port} | <vlan_list>}		15	GLOBAL_CONFIG
show interface <port_type_list> switchport [access | trunk | hybrid]	Use the how interfaces command to display the administrative and operational status of all interfaces or a specified interface.	0	EXEC
show vlan [id <vlan_list> | name <vword32> | brief]	Use the show vlan command to view the VLAN configuration.	13	EXEC
show vlan status [interface <port_type_list>] [combined|admin|nas|mvr|voice-vlan|mstp|erps|vcl |evc|gvrp|all|conflicts]	Use the show VLAN status command to view the VLANs configured for each interface.	13	EXEC
name <vword32>	Use the name <vword32> command to configure VLAN name.	13	CONFIG_VLAN
no name	The no form of this command will	13	CONFIG_VLAN

	restore the VLAN name to its default.		
switchport forbidden vlan {add|remove} <vlan_list>	Adds or removes forbidden VLANs from the current list of forbidden VLANs	15	INTERFACE_PORT_LIST
no switchport forbidden vlan	Allows for adding VLANs to an interface	15	INTERFACE_PORT_LIST
show switchport forbidden [{vlan <vlan_id>} | {name <word>}]	Lookup VLAN Forbidden port entry.	0	EXEC
voice vlan	Use the voice vlan global configuration command to enable voice vlan. Use the no form of this command to globally disable voice vlan.	15	GLOBAL_CONFIG
voice vlan vid <vlan_id>	Use the voice vlan vid global configuration command to configure voice vlan vid.	15	GLOBAL_CONFIG
no voice vlan vid	Use the no voice vlan vid global configuration command to restore the default voice vlan vid.	15	GLOBAL_CONFIG
voice vlan aging-time <10-10000000>	Use the voice vlan aging-time global configuration command to configure default voice vlan aging-time.	15	GLOBAL_CONFIG
no voice vlan aging-time	Use the no voice vlan aging-time global configuration command to restore the default voice vlan aging-time.	15	GLOBAL_CONFIG
voice vlan class { <0-7> | low | normal | medium | high }	Use the voice vlan class global configuration command to configure voice vlan class.	15	GLOBAL_CONFIG
no voice vlan class	Use the no voice vlan class global configuration command to restore the default voice vlan class.	15	GLOBAL_CONFIG
voice vlan oui <oui> [description <line32>]	Use the voice vlan oui global configuration command to set the oui entry for voice vlan.	15	GLOBAL_CONFIG
no voice vlan oui <oui>	Use the no voice vlan oui global configuration command to delete the oui entry.	15	GLOBAL_CONFIG
switchport voice vlan mode { auto | force | disable }	Use the switchport voice vlan mode	15	INTERFACE_PORT_LIST

	interface configuration command to configure to switchport voice vlan mode.		
no switchport voice vlan mode	Use the no switchport voice vlan mode interface configuration command to restore the default switchport voice vlan mode.	15	INTERFACE_PORT_LIST
switchport voice vlan security	Use the switchport voice vlan security interface configuration command to configure switchport voice vlan security mode. Use the no form of this command to globally disable switchport voice vlan security mode.	15	INTERFACE_PORT_LIST
switchport voice vlan discovery-protocol {oui | lldp | both}	Use the switchport voice vlan discovery-protocol interface configuration command to configure to switchport voice vlan discovery-protocol.	15	INTERFACE_PORT_LIST
no switchport voice vlan discovery-protocol	Use the no switchport voice vlan discovery-protocol interface configuration command to restore the default switchport voice vlan discovery-protocol.	15	INTERFACE_PORT_LIST
show voice vlan [oui <oui> | interface <port_type_list>]	Use the show voice vlan privilege EXEC command without keywords to display the voice vlan configuration, or particularly switchport configuration for the interface, or use the oui keyword to display oui table.	15	EXEC
debug gvrp protocol-state interface <port_type_list> vlan <vlan_list>		debug	EXEC
debug gvrp msti		debug	EXEC
debug gvrp statistic		debug	EXEC
gvrp		15	GLOBAL_CONFIG
gvrp time { [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>] }*1		15	GLOBAL_CONFIG
gvrp max-vlans <1-4095>		15	GLOBAL_CONFIG

gvrp		15	INTERFACE_PORT_LIST
gvrp join-request vlan <vlan_list>		15	INTERFACE_PORT_LIST
gvrp leave-request vlan <vlan_list>		15	INTERFACE_PORT_LIST

22 Configure DHCP Per Port

You can configure DHCP Per Port via the CLI and Web UI. The DHCP Per Port factory default mode is Disabled. See the *SM16TAT2DPA Web User Guide* for web UI mode operation.

The switch's DHCP server assigns IP addresses. Clients get IP addresses in sequence and the switch assigns IP addresses to on a per-port basis starting from the configured IP range. For example, if the IP address range is configured as 192.168.10.20 - 192.168.10.37 with one DHCP device connected to port 1, the client will always get IP address 192.168.10.20, then port 3 is always distributed IP address 192.168.10.22, even if port 2 is an empty port (because port 2 is always distributed IP address 192.168.10.21).

The switch does not allow a DHCP per Port pool to include the switch's address.
IP address assigned range and VLAN 1 should stay in the same subnet mask.
The configurable IP address range is allowed to configure over 18 IP addresses, but the switch always assigns one IP address per port connecting device.
The DHCP Per Port function is only supported on VLAN 1.

When the DHCP Per Port function is enabled, the switch software will automatically create the related DHCP pool named "DHCP_Per _Port".

Once the DHCP Per Port function is enabled on one switch, IPv4 DHCP client at VLAN1 mode (DMS DHCP mode), DHCP server mode are all limited to be enabled at the same time (an error message displays if attempted).

If the DHCP server pool has been configured, once you enable the DHCP Per port function that DHCP server pool configuration will be overwritten.

Only for VLAN 1, clients issued DHCP packets will not be broadcast/forwarded to other ports. DHCP packets in others VLANs will be broadcast/forwarded to others ports.

The DHCP Per Port function allows the switch to connect only one DHCP client device.

The DHCP Per Port function is confiured and shown using these CLI commands:

- # **show ip dhcp server**
- (config)# **ip dhcp server per-port**
- (config)# **no ip dhcp server per-port**

The CLI commands to configure and show DHCP Per Port are described below.

Command: Show the current DHCP Server and DHCP Per Port configuration

Syntax: **show ip dhcp server** <cr>

Description: Show if DHCP server is globally enabled or disabled, if all VLANs are disabled or enabled, and if the DHCP server Per Port function is disabled or enabled.

Example: Display the current DHCP Server and Per Port configuration, change the config, and display the results:

```
SM16TAT2DPA(config)# do show ip dhcp server

DHCP server is globally enabled.
  Enabled VLANs are 1.
  DHCP server per port is disabled.

SM16TAT2DPA(config)# ip dhcp server per-port
SM16TAT2DPA(config)# do show ip dhcp server

DHCP server is globally enabled.
  Enabled VLANs are 1.
  DHCP server per port is enabled.

SM16TAT2DPA(config)# no ip dhcp server per-port
SM16TAT2DPA(config)# do show ip dhcp server

DHCP server is globally enabled.
  Enabled VLANs are 1.
  DHCP server per port is disabled.

SM16TAT2DPA(config)#
```

Command: Configure the DHCP Per Port function

Syntax: **ip dhcp server per-port** <cr>

Description: Toggle the DHCP Per Port function from Diasbled (default) to Enabled.

Example: Toggle the DHCP Per Port function and show the resulting config:

```
SM16TAT2DPA# show ip dhcp server

DHCP server is globally disabled.
  All VLANs are disabled.

SM16TAT2DPA# con ter
SM16TAT2DPA(config)# ip dhcp ?
    excluded-address    Prevent DHCP from assigning certain addresses
    pool               Configure DHCP address pools
    relay              DHCP relay agent configuration
    server             Enable DHCP server
    snooping           DHCP snooping
SM16TAT2DPA(config)# ip dhcp server ?
    <cr>
SM16TAT2DPA(config)# ip dhcp server
SM16TAT2DPA(config)# end
SM16TAT2DPA# show ip dhcp server

DHCP server is globally enabled.
  All VLANs are disabled.

SM16TAT2DPA#
```

Appendix A Service, Warranty & Tech Support

See the *SM16TAT2DPA Install Guide* for related information.

Appendix B Compliance Information

See the *SM16TAT2DPA Install Guide* for related information.

Transition Networks
10900 Red Circle Drive
Minnetonka, MN 55343 USA
Tel: 952- 941-7600 or 1-800-526-9267
Fax: 952-941-2322

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