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NEC

iPASOLINK EX
Advanced

CLI COMMAND REFERENCE

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iPASOLINK EX Advanced

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CONTENTS

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1. DOCUMENT CONVENTIONS

1.1 Input Command Example

This chapter indicates the CLI syntax using the following styles:

- **Example 1**

  `max-frame-size` {P1 P2 | P3 P4}

- **Example 2**

  `ne-name` P1

This chapter uses the following rules to describe the CLI:

- **Example 3**

  P1: <equipment name>

1.2 Conventions

Indication	Description
`boldface`	The boldfaced character string indicates: ◆ A command (non parameter part) that must be entered by users definitely. ◆ In the Parameter description, the available choices of values to be entered. ◆ Whole syntax of entry examples. ◆ In requirements description, unavailable values to enter.
Pn	P1, P2..., that are expressed with no brackets are the values that must be entered.
[Pn]	P1, P2..., that are expressed with brackets are values that can be omitted.
[P1 P2]	For plural number of Ps with brackets, all values of Pn can be omitted. However, one of these values only cannot be omitted either. (Omit all, or enter all.)
[P1 [P2]]	When brackets are used as this way, all values of Pn can be omitted. Double-quoted value(s) (P2 in this example on left) alone can be omitted as well. However, the single quoted value (P1 in this example on left) cannot be omitted alone.
{P1 | P2}	Either of value P1 or P2 must be entered definitely.
< >	Value to be entered is determined by user. For example, enter the equipment name, memo, notes, etc.

1.3 Using Hyphens and Commas

1.3.1 Range of Values

- To enter the range of values or number of values, use hyphen (-) or put a comma (,) between numbers.
- These hyphen(s) and comma(s) can be used in mixture to fill in one parameter.
- The hyphen (-) denotes the sequential numbers between two specified numbers.
- The hyphen (-) allows the sequential numbers in ascending order only.
- The comma (,) allows the numbers in random order.
- When using both hyphen (-) and comma (,) in the same field, numbers to be entered must not be overlapped.

1.3.2 Interface IDs

- When a value to be entered is an Interface ID, the hyphen (-) is used to connect the ID and its Port Number only.
- When a value to be entered is an Interface ID, the comma (,) is used to connect the ID and its Slot Number only.
- Plural number of interface IDs with different Interface Names cannot be specified together.

1.3.3 Separation

- To express slot numbers of the same interface type, use diagonal (/) between slot numbers.

1.3.4 Examples

Following conventions are used to specify the target objects:

	Pn Examples	Description
Appropriate Entries	1-3	To enter 1 to 3 (1, 2 and 3); must be ascending.
	1-2,4	To enter 1 to 2 (1, 2) and 4.
	eth 0/1-3	To enter Ethernet Ports #1 to #3.
	eth 0/1,0/3	To enter Ethernet Ports #1 and #3.
	modem 1/1, 2/1	To enter: Modem Port #1 on Slot #1. Modem Port #1 on Slot #2.
Inappropriate Entries	3-1	Numbers appear to be in descending order.
	1-1	Numbers make no range.
	1,1	A number is overlapped.
	eth 0/1-1/1	Cannot continue the port numbers of different types. Ethernet Port number can be expressed by eth 0/n only.
	eth 0/1,2	Slot number cannot be shared (each Port # needs its Slot # always).
	eth 0/1,modem 1/1	Different types of Ports are mixed.

See the sub-section ***4.1.3 Specifying Target Object*** also.

1.4 Entry Rules and Restrictions

1.4.1 Available Characters

Use ASCII Characters (excluding control characters) to enter commands. See the table below (*1.4.5 List of Available Characters*) for reference.

1.4.2 Uppercase/Lowercase Characters

Both the uppercase and lowercase characters can be entered.

However, within the system, character strings of major commands will be normalized to lowercase expect for some parameters that have a meaning to discriminate between uppercase and lowercase characters, such as a Port Name, etc.

1.4.3 Maximum Number of Character Strings

Up to 512 characters can be entered per command, which includes characters to be entered by auto completion.

1.4.4 Other Restrictions

Some commands have more or detailed restrictions or rules, which are provided in the Command Reference.

1.4.5 List of Available Characters

b6-b4		0	1	10	11	100	101	110	111
b3-b0		0	1	2	3	4	5	6	7
0	0	—	—	<space> (NOTE 2.)	0	@	P	‘	p
1	1	—	—	!	1	A	Q	a	q
10	2	—	—	" (NOTE 3.)	2	B	R	b	r
11	3	—	—	#	3	C	S	c	s
100	4	—	—	$	4	D	T	d	t
101	5	—	—	%	5	E	U	e	u
110	6	—	—	&	6	F	V	f	v
111	7	—	—	’	7	G	W	g	w
1000	8	—	—	(	8	H	X	h	x
1001	9	—	—	)	9	I	Y	i	y
1010	A	—	—	*	:	J	Z	j	z
1011	B	—	—	+	;	K	[	k	{
1100	C	—	—	, (NOTE 4.)	<	L	\	l	|
1101	D	—	—	-	=	M	]	m	}
1110	E	—	—	.	>	N	^	n	~
1111	F	—	—	/	? (NOTE 5.)	O	_	o	—

NOTES:

1. *Characters in the cell cannot be entered.*
2. *Spaces can be used between other available characters. When a space is used among the name entry, the name requires to be quoted. (See **NOTE 3.**)*

   For entering the equipment name, a space cannot be put at the head or tail end.
3. *Quotations (") can be used only to bundle a name value that includes a space, e.g., "aaa bbb" etc.*
4. *A comma (,) can be used to divide the plural number of values, but cannot be used in a character string for names, such as Equipment Name, etc.*
5. *Question Mark (?) cannot be used to specify a name.*

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2. OPERATING GUIDE

2.1 Preparation

2.1.1 Connect CLI

Connect CLI Terminal (Your PC) and iPASOLINK EX/A using LAN Cable. The available terminal is RJ45 indicating **DCN**:

Figure 2-1 Terminal on iPASOLINK EX/A

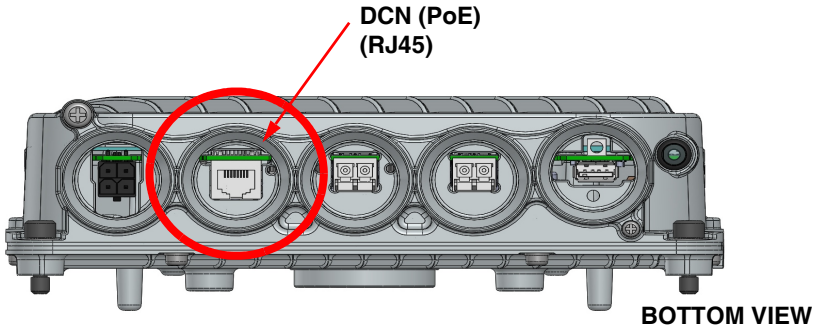
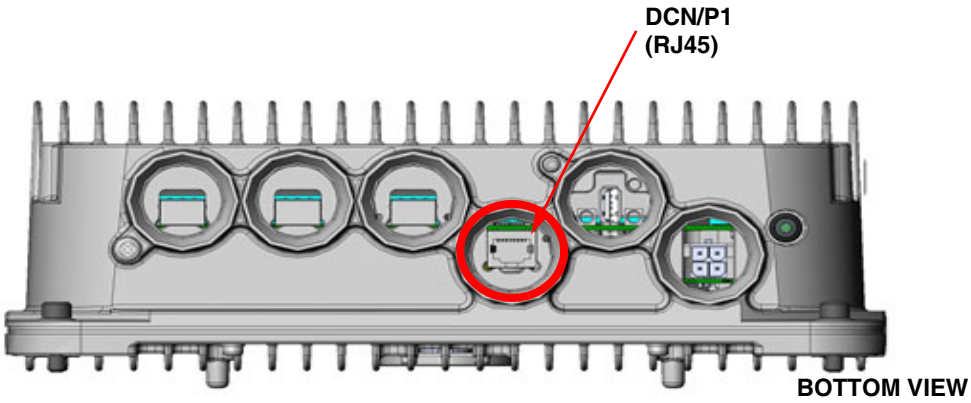


Figure 2-2 Terminal on iPASOLINK EX/A Dual



2.1.2 Set Up Terminal Soft on Your PC

Specify the following to log in to the equipment:

- Host Name: **172.17.254.253** (IP Address of the equipment)
- Protocol: SSHv2
- Port Number: 22
- Login ID: **Admin** (default)
- Login Password: **12345678** (default)

When successfully logged in, the equipment-name prompt appears.

2.2 Command Modes

iPASOLINK EX/A uses the following command modes. To check commands that each Command Mode supports, enter a question mark (**?**) at the prompt.

2.2.1 User Mode

When a user to log in belongs to the Operator Group, the mode where the user logs into applies to the User Mode. This mode supports the commands that retrieve the system information, etc. This mode cannot be switched to the Privileged Mode.

2.2.2 Privileged Mode

When a user to log in belongs to the Config Group or Admin Group, the mode where the user logs into applies to the Privileged Mode. In addition to commands that are supported by User Mode, this mode supports some of the setup commands. For the operability of each command, refer to each command's access level.

2.2.3 Configuration Mode

In the Privileged Mode, executing the **configuration** command switches to the Configuration Mode. The Configuration Mode mainly supports the commands to configure/remove the D-Plane. To return to the Privileged Mode, enter **exit**.

2.2.4 Interface Mode

In the Configuration Mode, executing the **interface** command switches to the Interface Mode. The Interface Mode mainly supports the commands to configure/remove the Interface setups. Depending on the Ethernet ports or MODEM ports, the supported commands differ. For the operability of each command, refer to the command mode of each command. To return to the Configuration Mode, enter **exit**.

2.2.5 LAG Configuration Mode

In the Configuration Mode, executing the **lag configuration** command switches to the LAG Configuration Mode. The LAG Configuration Mode supports the commands to configure the Link Aggregation Groups, and to modify some settings of Multi Traffic Aggregation Groups. To return to the Configuration Mode, enter **exit**.

2.2.6 Classification Profile Mode

In the Configuration Mode, executing the **`qos class profile configuration`** command switches to the Classification Profile Mode. The Classification Profile Mode supports commands to set up the QoS Classification Profile. To return to the Configuration Mode, enter **`exit`**.

2.2.7 Shaper Queue Profile Mode

In the Configuration Mode, executing the **`qos shaper queue-profile configuration`** command switches to the Shaper Queue Profile Mode.The Shaper Queue Profile Mode supports the commands to set the QoS Shaper Profile. To return to the Configuration Mode, enter **`exit`**.

2.3 Command Modes and Prompts

Command Modes	Access Group	Prompt
User Mode	Operator	`No.001@1>`
Privileged Mode	Admin	`No.001@1#`
	Config	`No.001@1$`
Configuration Mode	Admin	`No.001@1(config)#`
	Config	`No.001@1(config)$`
Interface Mode **➜ Ethernet Port** **➜ MODEM Port** **➜ Link Aggregation Group** **➜ Multi Traffic Aggregation Group**	Admin	`No.001@1(config-if)#`
	Config	`No.001@1(config-if)$`
LAG Configuration Mode	Admin	`No.001@1(config-lag)#`
	Config	`No.001@1(config-lag)$`
Classification Profile Mode	Admin	`No.001@1(config-class_map)#`
	Config	`No.001@1(config-class_map)$`
Shaper Queue Profile Mode	Admin	`No.001@1(config-queue_map)#`
	Config	`No.001@1(config-queue_map)$`

3. LIST OF COMMANDS

3.1 Equipment Setup

3.1.1 Equipment Configuration

◆ **NE Name**

- Modify NE Name — **ne-name**
- Delete NE Name — **no ne-name**
- Retrieve equipment information — **show equipment information**

3.2 Provisioning

3.2.1 ETH Function

3.2.1.1 Equipment Setting

◆ **Bridge Setting**

◆ Set VLAN Mode	**vlan mode**
◆ Remove VLAN Mode setting	**no vlan mode**
◆ Set Default VLAN	**vlan default-id**
◆ Remove Default VLAN setting	**no vlan default-id**
◆ Set Default TPID	**vlan default-tpid**
◆ Remove Default TPID	**no vlan default-tpid**
◆ Retrieve Bridge Setting Information	**show bridge config**

◆ **Max Frame Size Setting**

◆ Set Max Frame Size	**max-frame-size**
◆ Remove Max Frame Size setting	**no max-frame-size**

◆ **Other Setting**

◆ Set FDB Aging Time	**fdb aging-time**
◆ Remove FDB Aging Time setting	**no fdb aging-time**

3.2.1.2 ETH Port Setting

- Retrieve ETH Port setting information — **show eth-port information**

◆ **Port Usage**

- Connect/Disconnect port — **port (Ethernet)**
- Remove port setting — **no port (Ethernet)**

◆ **Port Name**

- Set port name — **name (Ethernet)**
- Remove port name — **no name (Ethernet)**

◆ **Media Type**

- Set Media Type — **media-type**
- Remove Media Type setting — **no media-type**

◆ **Speed**

- Set 10G/1G port speed — **speed-10g**
- Remove 10G/1G port speed setting — **no speed-10g**

◆ **Port Speed**

- Set port speed — **speed**
- Remove port speed setting — **no speed**

◆ **Flow Control**

- Enable/Disable Flow Control — **flow-control**
- Remove Flow Control Setting — **no flow-control**

◆ **SyncETH**

- Enable/Disable SyncETH port — **sync-eth**
- Remove SyncETH port setting — **no sync-eth**

◆ **LLDP Usage, LLDP Mode**

- Enable/Disable LLDP, Set LLDP Mode — **lldp**
- Remove LLDP setting — **no lldp**

◆ **ALS Usage, ALS Mode**

- Enable/Disable ALS Mode, Set ALS interval — **als**
- Remove ALS setting — **no als**

3.2.1.3 VLAN Setting

◆ **Add VLAN ID**

- Register VLAN ID — **vlan entry**
- Remove registered VLAN ID — **no vlan entry**
- Retrieve Registered VLAN ID — **show vlan entry**

◆ **VLAN Assignment**

- Set VLAN Port Type — **vlan**
- Remove VLAN Port Assignment — **no-vlan**
- Set VLAN Swap — **vlan swap**
- Remove VLAN Swap setting — **no vlan swap**
- Retrieve VLAN Port Assignment information — **show vlan config**

3.2.1.4 Link Aggregation Setting

- Switch to LAG Mode — **lag configuration**
- Remove LAG setting — **no lag configuration**
- Retrieve LAG information — **show lag information**
- Set LAG Port — **port (LAG)**
- Remove LAG Port setting — **no port (LAG)**
- Set LAG Name — **name (LAG)**
- Remove LAG Name — **no name (LAG)**
- Set LAG Operation Mode — **mode**
- Remove LAG Operation Mode — **no mode**
- Set LAG Sorting Rule — **rule**
- Remove LAG Distribution Rule — **no rule**

3.2.1.5 QoS/Classification Setting

◆ Classify Setting

◆ Set Classification Mode	**qos class mode**
◆ Remove Classification Mode	**no qos class mode**
◆ Set Classification Mapping	**qos class map**
◆ Remove Classification Mapping	**no qos class map**
◆ Set Default Port Priority	**qos class default-priority**
◆ Remove Default Port Priority	**no qos class default-priority**
◆ Enable/Disable Priority Overwrite	**qos overwrite**
◆ Remove Priority Overwrite setting	**no qos overwrite**
◆ Retrieve Classification setting information	**show qos class config**
◆ Switch to Classification Profile Mode	**qos class profile configuration**
◆ Remove Classification Profile setting	**no qos class profile configuration**
◆ Retrieve Classification Profile information	**show qos class profile**
◆ Set Classification Profile Name	**name (class-map)**
◆ Remove Classification Profile Name setting	**no name (class-map)**
◆ Select Mapping Filed	**class**
◆ Remove Mapping Filed setting	**no class**
◆ Set Classify Priority Mapping	**priority-mapping**
◆ Remove Classify Priority Mapping	**no priority-mapping**

◆ Policer Setting

- Add Policer Profile Index — **qos policer entry**
- Remove Policer Profile setting — **no qos policer entry**
- Retrieve Policer Profile information — **show qos policer entry**
- Set Detailed Policer Profile — **qos policer profile**
- Remove Policer Profile — **no qos policer profile**
- Retrieve Policer Profile information — **show qos policer profile**

◆ Shaper Setting

- Set Shaper Queue number — **qos shaper queue-number**
- Remove Shaper Queue number — **no qos shaper queue-number**
- Enable/Disable VLAN Shaper — **qos shaper vlan-mode**
- Remove VLAN Shaper setting — **no qos shaper vlan-mode**
- Retrieve Shaper setting — **show qos shaper equipment config**
- Set Shaper Group — **qos shaper group**
- Remove Shaper Group setting — **no qos shaper group**
- Retrieve Shaper Group information — **show qos shaper group config**
- Set Shaper Rate — **qos shaper**
- Remove Shaper Rate setting — **no qos shaper**
- Set Shaper Scheduler — **qos shaper scheduler**
- Remove Shaper Scheduler setting — **no qos shaper scheduler**
- Enable Shaper Profiler — **qos shaper queue entry**
- Remove Shaper Profiler setting — **no qos shaper queue entry**
- Retrieve Shaper Port setting information — **show qos shaper port config**

- Switch to Shaper Queue Profile Mode — **qos shaper queue-profile configuration**
- Remove Shaper Queue Profile setting — **no qos shaper queue-profile configuration**
- Retrieve Shaper Queue Profile setting information — **show qos shaper queue-profile**
- Set Shaper Name — **name (queue-map)**
- Remove Shaper Name — **no name (queue-map)**
- Set Shaper Drop Mode — **drop-mode**
- Remove Shaper Drop Mode — **no drop-mode**
- Set detailed Shaper Queue — **priority**
- Remove detailed Shaper Queue setting — **no priority**

3.2.1.6 Port Isolate Setting

- Set Port Isolate Group — **isolate**
- Remove Port Isolate Group setting — **no isolate**
- Retrieve Port Isolate Group setting information — **show isolate config**

3.2.1.7 Broadcast Strom Control Setting

- Set Broadcast Strom Control Rate — **broadcast storm-control rate**
- Remove Broadcast Strom Control Rate setting — **no broadcast storm-control rate**
- Enable/Disable Broadcast Strom Control — **broadcast storm-control**
- Remove Broadcast Storm Control setting — **no broadcast storm-control**
- Retrieve Broadcast Storm Control setting information — **show broadcast storm-control config**

3.3 Inventory

3.3.1 Equipment Inventory Information

- Retrieve equipment revisional information — **show equipment revision**
- Retrieve installed hardware information — **show equipment inventory**

4. COMMAND REFERENCE

4.1 General Use

4.1.1 Commands to Switch Mode

- To Configuration Mode: **`configuration`**
- To Interface Mode: **`interface <interface-name> <interface-ID>`**
- Returns to previous mode: **`exit`**
- Log out: **`exit`**
- To Privilege Mode: **`end`**

4.1.2 Usability

- Set number of lines to scroll: **`terminal scroll`**
- Remove scroll setting: **`no terminal scroll`**
- Retrieve the terminal setting: **`show terminal config`**
- Test connectivity: **`ping`**
- SSH Session: **`ssh`**
- Retrieve the information of equipment configuration: **`show running-config`**
- Retrieve all information: **`show all`**
- Retrieve command history: **`show history`**

NOTE: *The **show all** command and the **show running-config** command can be executed in up to 5 sessions at a time.*

4.1.3 Specifying Target Object

NOTE: *In the screen to display the retrieved data, both Ethernet and MODEM use the common header, which indicates:*

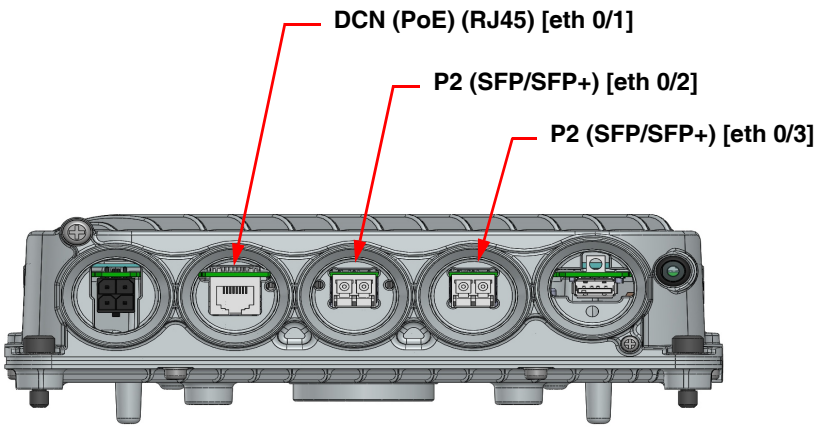
```
<0-1>/<1-3>                    Slot Number / Port Number
```

It does not mean that the Ethernet has Slot #1, or MODEM has Slot #0 with Ports #2 and #3. Values shown in the ***Example*** *column below only are the valid values to specify the target object.*

4.1.3.1 iPASOLINK EX/A

<interface-name>		<interface-ID>	Example	Description
Ethernet	**eth**	<Slot#/Port#> Slot #: **0** Port #: **1** to **3**	`eth 0/1`	**DCN (PoE)** Port.
			`eth 0/2`	**P2** Port
			`eth 0/3`	**P3** Port
MODEM	**modem**	<Slot#/Port#> Slot #: **1** Port #: **1**	`modem 1/1`	MODEM Port (one and only)
LAG (Ethernet)	**lag-eth**	<LAG Index #> LAG Index #: **1** to **3**	`lag-eth 1`	LAG Port of Index #1.
			`lag-eth 2`	LAG Port of Index #2.
			`lag-eth 3`	LAG Port of Index #3.

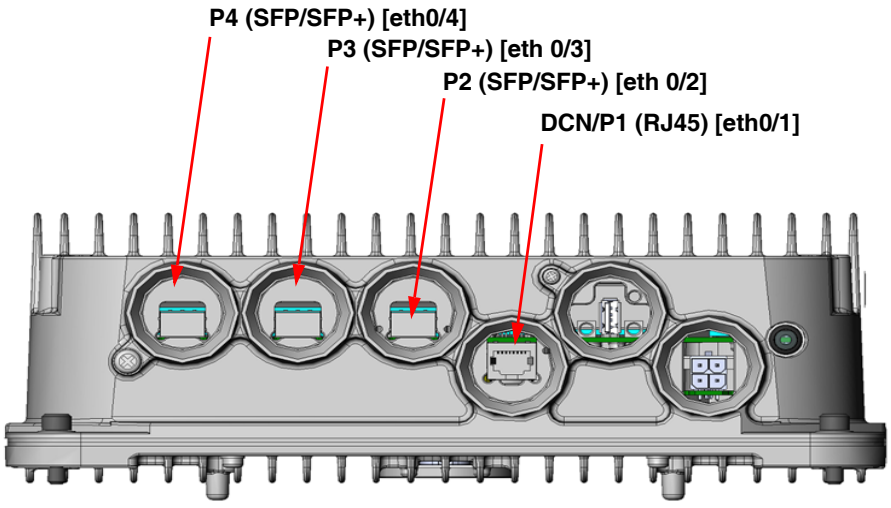
Figure 4-1 Ports on iPASOLINK EX/A and their Interface ID



4.1.3.2 iPASOLINK EX/A Dual

<interface-name>		<interface-ID>	Example	Description
Ethernet	**eth**	<Slot#/Port#> Slot #: **0** Port #: **1** to **4**	`eth 0/1`	**DCN/P1** Port.
			`eth 0/2`	**P2** Port
			`eth 0/3`	**P3** Port
			`eth 0/4`	**P4** Port
MODEM	**modem**	<Slot#/Port#> Slot #: **1** to **2** Port #: **1**	`modem 1/1`	Slot#1 MODEM Port
			`modem 2/1`	Slot#2 MODEM Port
LAG (Ethernet)	**lag-eth**	<LAG Index #> LAG Index #: **1** to **4**	`lag-eth 1`	LAG Port of Index #1.
			`lag-eth 2`	LAG Port of Index #2.
			`lag-eth 3`	LAG Port of Index #3.
			`lag-eth 4`	LAG Port of Index #4.
LAG (Multi Group)	**lag-multi**	<LAG Index #> LAG Index #: **1**	`lag-multi 1`	Multi group of Index #1.

Figure 4-2 Ports on iPASOLINK EX/A Dual and their Interface ID



4.2 Equipment Setup

4.2.1 Equipment Configuration

ne-name

Accessible: ☑ Admin / ☐ Config / ☐ Operator / ☑ Remote

Command Mode: Privileged Mode

This command specifies the equipment name, and CLI prompt as well.

Format	**`ne-name`** P1
Parameters	P1 = <equipment name> At least one, up to 32 characters can be entered. ***Default Value:*** `No.001`
Requirement/Note	None.
Entry Example	No.001@1# **`ne-name iPASO-EXA`**
Response Example	`iPASO-EXA@1#`
Relative Commands	**no ne-name** **show equipment information**

no ne-name

Accessible: ☑ Admin / ☐ Config / ☐ Operator / ☑ Remote

Command Mode: Privileged Mode

This command removes the registered equipment name, and CLI prompt.

Format	`no ne-name`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1# `no ne-name`
Relative Commands	**ne-name** **show equipment information**

show equipment information

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of equipment configuration.

Format	`show equipment information`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1# `show equipment information`
Relative Commands	**ne-name** **no ne-name**

4.3 Provisioning

4.3.1 ETH Function

4.3.1.1 Equipment Setting

vlan mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the VLAN mode; IEEE802.1q or IEEE802.1ad.

Format

```
vlan mode P1
```

Parameters

P1 = {**802.1q** | **802.1ad**}

802.1q = Selects IEEE 802.1q mode.

802.1ad = Selects IEEE 802.1ad mode.

Default Value: `802.1q`

Requirement/Note

When the VLAN ID that is assigned to the port is not the Default VLAN, the settings cannot be modified.

Entry Example

No.001@1(config)# **`vlan mode 802.1ad`**

Relative Commands

no vlan mode
vlan default-id
no vlan default-id
vlan default-tpid
no vlan default-tpid
vlan
no-vlan
show bridge config

no vlan mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the VLAN mode setting.

Format

```
no vlan mode
```

Parameters

None.

Requirement/Note

When the VLAN ID that is assigned to the port is not the Default VLAN, the settings cannot be modified.

Entry Example

No.001@1(config)# `no vlan mode`

Relative Commands

vlan mode
vlan default-id
no vlan default-id
vlan default-tpid
no vlan default-tpid
vlan
no-vlan
show bridge config

vlan default-id

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the default VLAN ID.

Format

```
vlan default-id P1
```

Parameters

P1 = `1` *to* `4094` (VLAN ID)

Default Value: `1`

Requirement/Note

A VLAN ID that is already assigned to a port cannot be selected for the Default VLAN.
A VLAN ID that is already assigned as Aggregation VLAN to a Multi LAG cannot be selected for the default VLAN.

Entry Example

```
No.001@1(config)# vlan default-id 4094
```

Relative Commands

vlan mode
no vlan mode
no vlan default-id
vlan entry
no vlan entry
vlan
no-vlan
show bridge config

no vlan default-id

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the default VLAN ID setting.

Format	`no vlan default-id`
Parameters	None.
Requirement/Note	Port assigned VLAN ID cannot use the Default VLAN ID.
Entry Example	No.001@1(config)# `no vlan default-id`
Relative Commands	**vlan mode** **no vlan mode** **vlan default-id** **vlan entry** **no vlan entry** **vlan** **no-vlan** **show bridge config**

vlan default-tpid

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the TPID of Customer VLAN or Service VLAN.

Format

`vlan default-tpid` {P1 P2 | P3 P4}

Parameters

P1 = **`c-tag`** (Customer VLAN)

P2 = **`0x8100`** *to* **`0xffff`**

Default Value: `0x8100`

P3 = **`S-tag`** (Service VLAN)

P4 = **`0x8100`** *to* **`0xffff`**

Default Value: `0x88a8`

Requirement/Note

Following values cannot be specified:
`0x86DD`, **`0x8808`**, **`0x8809`**

Entry Example

```
No.001@1(config)# vlan default-tpid c-tag 0x8100
No.001@1(config)# vlan default-tpid s-tag 0x88a8
```

Relative Commands

vlan mode
no vlan mode
no vlan default-tpid
show bridge config

no vlan default-tpid

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the TPID setting.

Format

```
no vlan default-tpid {P1|P2}
```

Parameters

P1 = `c-tag` (Customer VLAN)

P2 = `s-tag` (Service VLAN)

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no vlan default-tpid c-tag
No.001@1(config)# no vlan default-tpid s-tag
```

Relative Commands

vlan mode
no vlan mode
vlan default-tpid
show bridge config

max-frame-size

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the maximum frame size.

Format

`max-frame-size` {P1 P2 | P3 P4}

Parameters

P1 = **`10gbe/gbe`**

Ethernet type of the target port is 10 GbE or 1GbE.

P2 = **`64`** *to* **`9600`**

Specifies the maximum frame size for 10/1 GbE port; unit = byte)

Default Value: `1522`

P3 = **`fe`**

Ethernet type of the target port is Fast Ethernet.

P4 = **`64`** *to* **`2000`**

Specifies the maximum frame size for FE port; unit = byte)

Default Value: `1522`

Requirement/Note

None.

Entry Example

```
No.001@1(config)# max-frame-size 10gbe/gbe 9600
No.001@1(config)# max-frame-size fe 2000
```

Relative Commands

no max-frame-size
show bridge config

no max-frame-size

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the maximum frame size setting.

Format

`no max-frame-size` {P1 | P2}

Parameters

P1 = **`10gbe/gbe`**

Ethernet type of the target port is 10 GbE or 1GbE

P2 = **`fe`**

Ethernet type of the target port is Fast Ethernet

Requirement/Note

None.

Entry Example

```
No.001@1(config)# max-frame-size 10gbe/gbe
No.001@1(config)# max-frame-size fe
```

Relative Commands

max-frame-size
show bridge config

fdb aging-time

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the Forwarding Database (FDB) Aging Timer.

Format

`fdb aging-time` {P1 | P2}

Parameters

P1 = `0` (Disables Aging Timer)

P2 = `5` *to* `163680` (Enables and sets Aging Timer; unit = second)

Default Value: `300`

Requirement/Note

None.

Entry Example

```
No.001@1(config)# fdb aging-time 0
No.001@1(config)# fdb aging-time 5
```

Relative Commands

no fdb aging-time
show bridge config

no fdb aging-time

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the FDB Aging Timer setting.

Format	`no fdb aging-time`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config)# `no fdb aging-time`
Relative Commands	**fdb aging-time**, **show bridge config**

show bridge config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of bridge configuration.

Format	`show bridge config`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1# `show bridge config`
Relative Commands	**vlan mode** **no vlan mode** **vlan default-id** **no vlan default-id** **vlan default-tpid** **no vlan default-tpid** **max-frame-size** **no max-frame-size** **fdb aging-time** **no fdb aging-time**

4.3.1.2 ETH Port Setting

port (Ethernet)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command enables/disables the Ethernet Port usage.

Format	`port` P1
Parameters	P1 = {**`enable`** | **`disable`**} **enable**: Enables the target port to use. **disable**: Disables the target port. ***Default Value:*** `disable`
Requirement/Note	Cannot specify **enable** to the SFP Port to which the Software Key of the SFP Port Usage is not properly applied.
Entry Example	No.001@1(config-if)# **`port enable`**
Relative Commands	**no port (Ethernet)** **show eth-port information**

no port (Ethernet)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Ethernet Port usage setting.

Format	`no port`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no port`
Relative Commands	**port (Ethernet)** **show eth-port information**

name (Ethernet)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Ethernet Port Name.

Format

`name` P1

Parameters

P1 = < port name > (Enter a port name; 0 to 32 characters long)

Default Value: `NULL`

Requirement/Note

None.

Entry Example

No.001@1(config-if)# **`name A1`**

Relative Commands

no name (Ethernet)
show eth-port information

no name (Ethernet)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Ethernet Port name setting.

Format	`no name`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no name`
Relative Commands	**name (Ethernet)** **show eth-port information**

media-type

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Media Type of the Ethernet port.

Format

```
media-type P1
```

Parameters

P1 = {**ele** | **opt**}

ele: Target port is the electric port.

opt: Target port is the optic port.

Default Value: `ele` (for RJ45 Port)
`opt` (for SFP/SFP+ Port)

Requirement/Note

This command cannot be executed to RJ45 Ports.

The value **ele** cannot be specified to 10 GbE Ports.

For an **opt** specified port, its **Port Speed** is automatically set to **Auto Negotiation**.

For an **ele** specified port, its **ALS** (Automatic Laser Shutdown) and **Synchronous Ethernet** settings are disabled automatically.

Entry Example

No.001@1(config-if)# **media-type opt**

Relative Commands

no media-type
speed-10g
no speed-10g
sync-eth
no sync-eth
als
no als
show eth-port information

no media-type

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the media type setting of the Ethernet port.

Format

```
no media-type
```

Parameters

None.

Requirement/Note

This command cannot be executed to RJ45 Ports.

When this command is executed, **Port Speed** of the target port is automatically set to **Auto Negotiation**.

Entry Example

```
No.001@1(config-if)# no media-type
```

Relative Commands

media-type
speed-10g
no speed-10g
sync-eth
no sync-eth
als
no als
show eth-port information

speed-10g

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command selects 10 GbE usage for the Ethernet port that supports either 10 GbE or 1 GbE.

Format

```
speed-10g P1
```

Parameters

P1 = {**enable** | **disable**}

enable: Selects 10 GbE usage.

disable: Selects 1 GbE usage.

Default Value: `disable`

Requirement/Note

Cannot specify **enable** to the SFP Port to which the Software Key of the SFP Port Usage is not properly applied.

When **enable** is executed to the port, its **Media Type** is automatically set to Optic (**media-type opt**), and its **Port Speed** is also automatically set to 10 Gbit/s, Full-Duplex (**speed 10g-full**).

Entry Example

```
No.001@1(config-if)# speed-10g enable
No.001@1(config-if)# speed-10g disable
```

Relative Commands

media-type
no media-type
no speed-10g
speed
no speed
show eth-port information

no speed-10g

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the 10 GbE usage setting of the port.

Format	`no speed-10g`
Parameters	None.
Requirement/Note	When this command executed to the port, its **Port Speed** setting is automatically changed to **Auto Negotiation**.
Entry Example	No.001@1(config-if)# `no speed-10g`
Relative Commands	**media-type** **no media-type** **speed-10g** **speed** **no speed** **show eth-port information**

speed

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the detailed port speed settings.

Format

`speed` {P1 | P2 P3}

Parameters

P1 = {**`auto`** | **`10g-full`**}

auto: Specifies the Ethernet port to use Auto Negotiation for its speed. For a 1 GbE optical port (**media-type opt**; **10g-speed disable**), **auto** is the only available value here.

10g-full: Specifies the Ethernet port speed to 10 Gbit/s, Full Duplex. This value is available for 10 GbE Ports only.

Default Value: `10g-full` (when the port is 10 GbE)
`auto` (when the port is 1 GbE)

P2 = {**`100m-full`** | **`10m-full`**}

100m-full: Specifies the Ethernet port speed to 100 Mbit/s, Full Duplex.

10m-full: Specifies the Ethernet port speed to 10 Mbit/s, Full Duplex. This value cannot be executed to the port to which the Synchronous Ethernet is specified.

P3 = {**`mdi`** | **`mdi-x`**}

mdi: Specifies the Ethernet port to MDI.

mdi-x: Specifies the Ethernet port to MDI-X

Requirement/Note

Cannot specify **10g-full** if the target port is not 10 GbE

To the ports other than Optic 10 GbE, **auto** is the only available value.

The port to which the Synchronous Ethernet is specified cannot select, **10m-full**.

Entry Example

```
No.001@1(config-if)# speed auto
No.001@1(config-if)# speed 10g-full
No.001@1(config-if)# speed 100m-full mdi
No.001@1(config-if)# speed 10m-full mdi-x
```

Relative Commands

media-type
no media-type
speed-10g
no speed-10g
no speed
flow-control
no flow-control
sync-eth
no sync-eth
show eth-port information

no speed

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the detailed port speed settings.

Format	`no speed`
Parameters	None.
Requirement/Note	When this command is executed to the 10 GbE Port, Full Duplex setting (**speed 10g-full**) is applied to the port. To set a value other than **10g-full**, disable the 10 GbE port usage (**speed-10g disable**) first.
Entry Example	No.001@1(config-if)# `no speed`
Relative Commands	**media-type** **no media-type** **speed-10g** **no speed-10g** **speed** **flow-control** **no flow-control** **sync-eth** **no sync-eth** **show eth-port information**

flow-control

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command enables or disables the Flow Control function

Format

```
flow-control P1
```

Parameters

P1 = {**enable** | **disable**}

enable: Enables the Flow Control function.

disable: Disables the Flow Control function.

Default Value: `disable`

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# flow-control enable
No.001@1(config-if)# flow-control disable
```

Relative Commands

speed
no speed
no flow-control
show eth-port information

no flow-control

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the setting of Flow Control function usage.

Format	`no flow-control`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no flow-control`
Relative Commands	**speed** **no speed** **flow-control** **show eth-port information**

sync-eth

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command enables or disables the Synchronous Ethernet function.

Format

`sync-eth` P1

Parameters

P1 = {**`enable`** | **`disable`**}

enable: Enables the Synchronous Ethernet function.

disable: Disables the Synchronous Ethernet function.

Default Value: `disable`

Requirement/Note

Cannot specify **enable** if the usage of target SFP Port is set to electric (**media-type ele**).

Cannot specify **enable** if the Port Speed of target SFP Port is set to 10 Mbit/s, Full Duplex (**speed 10m-full**).

Entry Example

```
No.001@1(config-if)# sync-eth enable
No.001@1(config-if)# sync-eth disable
```

Relative Commands

media-type
no media-type
speed
no speed
no sync-eth
show eth-port information

no sync-eth

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the setting of Synchronous Ethernet function usage.

Format	`no sync-eth`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no sync-eth`
Relative Commands	**media-type** **no media-type** **speed** **no speed** **sync-eth** **show eth-port information**

lldp

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command sets/modifies the LLDP function.

Format

`lldp` {P1 [P2] | P3}

Parameters

P1 = **`enable`** (Enables the LLDP function.)

P2 = {**`standard`** | **`proprietary-mac`**}

standard: Uses the standard (IEEE802.1ab) MAC Address for LLDP

proprietary-mac: Uses the proprietary MAC Address, which should be applied when exchanging LLDP to/from the site(s) next to the adjacent site(s).

P3 = **`disable`** (Disables the LLDP function.)

the Synchronous Ethernet function.

Default Value: `disable`

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# lldp enable standard
No.001@1(config-if)# lldp enable proprietary-mac
No.001@1(config-if)# lldp disable
```

Relative Commands

no lldp
show eth-port information

no lldp

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the setting of LLDP function usage.

Format	`no lldp`
Parameters	None,
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no lldp`
Relative Commands	**lldp** **show eth-port information**

als

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command sets the usage of ALS function.

Format

`als` {P1 P2 | P3}

Parameters

P1 = **`enable`** (Enables the ALS function.)

P2 = {**`60`** | **`180`** | **`300`**}

Specifies the optical output cycle of the Automatic Laser Shutdown (ALS) function. (unit = second)

P3 = **`disable`** (Disables the ALS function.)

Default Value: `disable`

Requirement/Note

This command cannot be executed to RJ45 Ports.

The value **enable** cannot be set to the SFP ports whose **Media Type** is set to electric (**media-type ele**).

Entry Example

```
No.001@1(config-if)# als enable 60
No.001@1(config-if)# als disable
```

Relative Commands

media-type
no media-type
no als
show eth-port information

no als

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the settings of ALS function.

Format	`no als`
Parameters	None.
Requirement/Note	This command cannot be executed to RJ45 Ports.
Entry Example	No.001@1(config-if)# `no als`
Relative Commands	**media-type** **no media-type** **als** **show eth-port information**

show eth-port information

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of the Ethernet port settings.

Format

```
show eth-port information [P1 P2]
```

Parameters

P1 = **eth**

Selects interface type: Ethernet. This parameter accepts **eth** only. When omitted, all the port are selected.

P2 = < Interface ID > (Specify target interface ID. Multiple entries available)

Requirement/Note

None.

Entry Example

```
No.001@1# show eth-port information
```

Relative Commands

port (Ethernet)
no port (Ethernet)
name (Ethernet)
no name (Ethernet)
media-type
no media-type
speed-10g
no speed-10g
speed
no speed
flow-control
no flow-control
sync-eth
no sync-eth
lldp
no lldp
als
no als

4.3.1.3 VLAN Setting

vlan entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command registers VLANs.

Format

`vlan entry` P1 [P2]

Parameters

P1 = `1` *to* `4094` (VLAN ID.)

More than one VLAN ID can be registered at a time.

P2 = < VLAN Service Name > (0 to 32 characters long)

When omitted, this parameter sets `NULL`.

Requirement/Note

The VLAN Service Name, except `NULL`, cannot be shared by VLANs.

When registering more than one VLAN ID at a time, VLAN Service Name cannot be specified.

When the VLAN is specified to ERP Control VLAN, its VLAN Service Name cannot be changed.

Entry Example

```
No.001@1(config)# vlan entry 1 VLAN_0001
No.001@1(config)# vlan entry 2-10,30
```

Relative Commands

vlan default-id
no vlan default-id
no vlan entry
vlan
no-vlan
show vlan entry

no vlan entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the registered VLANs.

Format

`no vlan entry` [P1 [P2]]

Parameters

P1 = `1` *to* `4094` (VLAN ID.)

Specify VLAN ID(s) to be removed.

More than one VLAN ID can be specified.

When this parameter is omitted, all port assigned VLANs, excluding VLANs noted in the **Requirement/Note** descriptions, are removed.

P2 = < VLAN Service Name > (1 to 32 characters long)

Specify this parameter to delete only the VLAN Service Names.

Requirement/Note

When selecting more than one VLAN ID at a time, VLAN Service Name (P2) cannot be specified.

VLAN Service Name of the Control VLAN cannot be removed.

VLAN ID(s) that is/are assigned to the port(s) cannot be removed.

The Default VLAN cannot be removed.

If no VLAN ID is selected, all the registered VLANs excluding Default VLAN will be removed.

Entry Example

```
No.001@1(config)# no vlan entry 1 VLAN_0001
No.001@1(config)# no vlan entry 2-10,30
```

Relative Commands

vlan default-id
no vlan default-id
vlan entry
vlan
no-vlan
show vlan entry

show vlan entry

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of registered VLAN(s).

Format

`show vlan entry` [P1]

Parameters

P1 = **`1`** *to* **`4094`** (VLAN ID.)

Specify VLAN ID(s) to retrieve its information.

More than one VLAN ID can be specified.

When this parameter is omitted, the information of all the registered VLANs will be retrieved.

Requirement/Note

None.

Entry Example

```
No.001@1# show vlan entry 2-10,30
No.001@1# show vlan entry
```

Relative Commands

vlan mode
no vlan mode
vlan entry
no vlan entry
vlan
no-vlan

vlan

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command assigns the VLAN Port.

Format

`vlan` {{P1 | P2} P3 | P4 P5 | P6 P7 | P8 P9 | P10 P11 P12 P13 P14}

Parameters

P1 = **`access`**

Selects Access port type for configuring VLAN. This option is available for VLAN Mode 802.1q only.

The Access- assigned port can forward untagged frames and frames with VLAN Tag that is assigned by VLAN ID (**vlan-id**).

For incoming untagged frames, Customer VLAN that is assigned by VLAN ID (**vlan-id**) is added.

For outgoing frames, VLAN pop is proceeded.

P2 = **`tunnel`**

Selects Tunnel port type for configuring VLAN. This option is available for VLAN Mode 802.1q only

The Tunnel assigned port can forward untagged frames and VLAN tagged frames.

P3 = **`1`** *to* **`4094`**

Specifies VLAN ID for Access/Tunnel port. Registered VLAN ID only.

P4 = **`trunk`**

Selects Trunk port type for configuring VLAN. This option is available for VLAN Mode 802.1q only.

The Trunk assigned port can forward frames with Customer VLAN Tag that is assigned by VLAN ID (**vlan-id**).

P5 = **`1`** *to* **`4094`**

Specifies VLAN ID for Trunk port. Registered VLAN ID only. Multiple entries are available.

P6 = **`c-access`**

Selects C-Access port type for configuring VLAN. This option is available for VLAN Mode 802.1ad only.

The C-Access assigned port can forward untagged frames, Customer VLAN Tagged frames, and frames with Service VLAN Tag that is specified by VLAN ID (**vlan-id**).

P7 = **`1`** *to* **`4094`**

Specifies VLAN ID for Trunk port. Registered VLAN ID only.

P8 = **`s-trunk`**

Selects Trunk port type for configuring VLAN. This option is available for VLAN Mode 802.1ad only.

The S-Trunk assigned port can forward frames with Service VLAN Tag that is specified by VLAN ID (**vlan-id**).

P9 = **`1`** *to* **`4094`**

Specifies VLAN ID for S-Trunk port. Registered VLAN ID only. Multiple entries are available.

P10 = **`c-bridge`**

Selects C-Bridge port type for configuring VLAN. This option is available for VLAN Mode 802.1ad only.

The C-Bridge assigned port can forward frames with C-Tag specified Customer VLAN Tag, and with S-Tag specified Service VLAN Tag.

For incoming frames with C-Tag specified Customer VLAN Tag, the Service VLAN that is specified by S-Tag will be added.

For incoming frames with C-Tag specified Customer VLAN Tag, the Service VLAN that is specified by S-Tag will be added.

For outgoing frames, the Service VLAN pop is proceeded.

P11 = **`s-tag`**

P12 = **`1`** *to* **`4094`**

Specifies VLAN ID for S-Tag. Registered VLAN ID only.

P13 = **`c-tag`**

P14 = **`1`** *to* **`4094`**

Specifies VLAN ID for C-Tag. Registered VLAN ID only. Multiple entries are available.

Requirement/Note

The Default VLAN cannot be selected for this setting.

The VLAN that is assigned to ERPS Control VLAN cannot be assigned to other ports.

VLAN ID of the unregistered VLAN cannot be entered.

◆For VLAN Mode 802.1q

When selected VLAN mode is IEEE 802.1q mode (**vlan mode 802.1q**), **c-access**, **s-trunk** and **c-bridge** cannot be specified.

In the VLAN mode IEEE 802.1q, following combinations of port types can specified to the same one port:

- Access Port × 1
- Access Port × 1 + Trunk Port × n
- Trunk Port × n
- Tunnel Port × 1

For MODEM Ports and ERPS Ring Ports, the available configuration is Trunk × n only.

To change the Port Type to/from Tunnel in the 802.1q mode, the VLAN assigned to the port should be removed in advance.

◆For VLAN Mode 802.1ad

When the selected VLAN mode is IEEE 802.1ad (**vlan mode 802.1ad**), access and tunnel cannot be specified.

In the VLAN mode IEEE802.1ad, the following combinations of port types can be specified to the same one port:

- C-Access Port × 1
- C-Access Port × 1 + S-Trunk Port × n
- S-Trunk Port × n
- C-Bridge Port × n

For MODEM Ports and ERPS Ring Ports, the available configuration is S-Trunk × n only.

To change the Port Type to/from C-Bridge in the 802.1ad mode, the VLAN assigned to the port should be removed in advance.

When selecting C-Bridge, more than 15 C-VLANs cannot be specified per S-VLAN.

When selecting C-Bridge, more than 16 S-VLANs cannot be specified per equipment.

When Selecting C-Bridge, the same C-VLAN cannot be specified to the same port.

Entry Example

```
No.001@1(config-if)# vlan access 100
No.001@1(config-if)# vlan trunk 200-250,300
No.001@1(config-if)# vlan c-access 400
No.001@1(config-if)# vlan s-trunk 500-505,550
No.001@1(config-if)# vlan c-bridge s-tag 1000 c-tag 1400
```

Relative Commands

vlan mode
no vlan mode
vlan default-id
no vlan default-id
vlan entry
no vlan entry
no-vlan
vlan swap
no vlan swap
show vlan config

no-vlan

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the VLAN Port assignments.

Format

`no vlan` {[P1] | P2 [P3 [P4 P5]]}

Parameters

P1 = **`1`** *to* **`4094`**

Specifies VLAN ID for Access, Trunk, Tunnel, C-Access and/or S-Trunk Port(s) to remove. Multiple entries are available.

When this parameter is omitted, all port assigned VLANs, excluding VLANs noted in the **Requirement/Note** descriptions, are removed.

P2 = **`s-tag`**

Specify this parameter to remove the C-Bridge assignments, Service VLANs.

P3 = **`1`** *to* **`4094`**

Specifies VLAN ID for S-Tag to remove. The specified Service VLANs and its/their subordinated Customer VLANs are removed.

When the command with P2 (**s-tag**) only (omitting P3) is executed, all the Service VLANs and their subordinated Customer VLANs are removed.

Multiple entries are available. However, when the multiple VLAN IDs are specified here, the Customer VLANs (**c-tag**) cannot be specified.

P4 = **`c-tag`**

Specify this parameter to remove the C-Bridge assignments, Customer VLANs.

P5 = **`1`** *to* **`4094`**

Specifies VLAN ID for C-Tag to remove. Specified Customer VLANs are all to be removed. Multiple entries are available.

Requirement/Note

The Default VLAN cannot be removed.

The VLAN that is assigned to ERPS Control VLAN cannot be removed.

The Traffic VLAN specified to ERPS Ring Port cannot be removed.

The PTP assigned VLAN cannot be removed.

The Swap-assigned VLANs cannot be removed.

Entry Example

```
No.001@1(config-if)# no vlan 100
No.001@1(config-if)# no vlan
No.001@1(config-if)# no vlan s-tag 1000 c-tag 1400
No.001@1(config-if)# no vlan s-tag
```

Relative Commands

vlan mode
no vlan mode
vlan default-id
no vlan default-id
vlan entry
no vlan entry
vlan
vlan swap
no vlan swap
show vlan config

vlan swap

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the VLAN Swap assignments.

Format

`vlan swap` P1 P2 P3 P4

Parameters

P1 = **`internal`**

Specifies the equipment internal for the use of VLANs.

P2 = **`1`** *to* **`4094`**

Specifies VLAN ID to use in the equipment internal.

VLAN IDs of VLANs that are not assigned to Trunk or S-Trunk cannot be specified here.

The Default VLAN ID cannot be specified for the internal use.

P3 = **`external`**

Specifies the equipment external for the use of VLANs.

P4 = **`1`** *to* **`4094`**

Specifies VLAN ID to use at the equipment external.

Unregistered VLAN ID cannot be specified here.

The same VLAN ID on the same port cannot be specified to external use.

Requirement/Note

The same VLAN ID cannot be specified to VLAN to swap and swapped VLAN.

Up to 256 VLAN Swap settings per equipment can be specified.

Entry Example

No.001@1(config-if)# **`vlan swap internal 100 external 200`**

Relative Commands

vlan mode
no vlan mode
vlan default-id
no vlan default-id
vlan entry
no vlan entry
vlan
no-vlan
no vlan swap
show vlan config

no vlan swap

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the settings of VLAN Swap assignments.

Format

`no vlan swap` [P1 P2]

Parameters

P1 = `internal`

Selects VLANs for equipment internal use.

P2 = `1` *to* `4094`

Specifies VLAN ID (internal use) to remove.

When omitted, all the registered Swap VLANs are removed.

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# no vlan swap internal 100
No.001@1(config-if)# no vlan swap
```

Relative Commands

vlan mode
no vlan mode
vlan default-id
no vlan default-id
vlan entry
no vlan entry
vlan
no-vlan
vlan swap
show vlan config

show vlan config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of registered VLANs.

Format

`show vlan config` {P1 [P2 P3] | P4 [P5]}

Parameters

P1 = **`port`**

Retrieves the information of VLAN per VLAN assigned port.

P2 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selects (an) Ethernet Port(s).

modem: Selects (a) MODEM Port(s).

lag-eth: Selects (a) port(s) assigned to LAG (Ethernet).

lag-multi: Selects (a) port(s) assigned to Multi Traffic Aggregation When omitted, information of all ports are retrieved.

P3 = < interface ID >

Specify the interface ID to retrieve the information.

Multiple entries are available.

P4 = **`vlan`**

Retrieves the information of VLAN assigned ports per VLAN.

P5 = **`1`** *to* **`4094`**

Specify the VLAN ID to retrieve

When omitted, the information of all VLANs is retrieved.

Requirement/Note

None.

Entry Example

```
No.001@1# show vlan config port
No.001@1# show vlan config port lag-multi
No.001@1# show vlan config vlan
No.001@1# show vlan config vlan 100
```

Relative Commands

vlan mode
no vlan mode
vlan
no-vlan
vlan swap
no vlan swap

4.3.1.4 Link Aggregation Setting

lag configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command switches the mode to LAG Configuration mode.

Format

`lag configuration` P1 P2

Parameters

P1 = {`eth` | `multi`}

eth: Specifies Link Aggregation Group (LAG).

multi: Specifies Multi Traffic Aggregation (MTA). This value cannot be selected if no MTA is registered.

P2 = `1` *to* `4`

Specifies a group number of LAG or MTA.

Requirement/Note

This command cannot be executed If the Software Key of LAG or LACP (line) is not properly applied.

Entry Example

```
No.001@1(config)# lag configuration eth 1
No.001@1(config-lag)# exit
No.001@1(config)# lag configuration multi 1
No.001@1(config-lag)# exit
```

Relative Commands

no lag configuration
show lag information
port (LAG)
no port (LAG)
no name (LAG)
name (LAG)
mode
no mode
rule
no rule

no rule
interface
end
exit

no lag configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the LAG Configuration settings.

Format

`no lag configuration` P1 [P2]

Parameters

P1 = **`eth`**

Specifies Link Aggregation Group (LAG) to remove.

P2 = **`1`** *to* **`4`**

Specifies a group number of LAG to remove its/their settings. Multiple entries are available.

When omitted, all the registered LAG are removed.

Requirement/Note

This command cannot be executed If the Software Key of LAG or LACP (line) is not properly applied.

Entry Example

```
No.001@1(config)# no lag configuration eth 1
No.001@1(config)# no lag configuration eth 1-3
No.001@1(config)# no lag configuration eth
```

Relative Commands

lag configuration
show lag information
port (LAG)
no port (LAG)
no name (LAG)
name (LAG)
mode
no mode
rule
no rule
no rule
interface
end
exit

show lag information

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of LAG settings and the status of LAG.

Format

`show lag information` [P1 P2]

Parameters

P1 = {**`lag-eth`** | **`lag-multi`**}

lag-eth: Selects Link Aggregation Group (LAG).

lag-multi: Selects Multi Traffic Aggregation (MTA).

When omitted, all information of both LAG and MTA is retrieved.

P2 = **`1`** *to* **`4`**

Specifies a group number of LAG/MTA to retrieve its/their settings and status information. Multiple entries are available.

Requirement/Note

None.

Entry Example

```
No.001@1# show lag information lag-eth 1
No.001@1# show lag information
No.001@1# show lag information lag-multi 1
```

Relative Commands

lag configuration
no lag configuration
port (LAG)
no port (LAG)
no name (LAG)
name (LAG)
mode
no mode
rule
no rule
no rule

interface
end
exit

port (LAG)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command assigns LAG to (a) port(s).

Format

`port` P1 P2 [P3]

Parameters

P1 = **`eth`**

Enter **eth** to select an Ethernet Port.

P2 = < interface ID >

Specifies (an) interface ID(s). Multiple entries are available. The interface that is already assigned to other LAG cannot be selected.

P3 = {**`active`** | **`standby`**}

active: Sets the port to the active mode.

standby: Sets the port to standby mode. Cannot execute standby to all ports of an LAG. (LAG must have an active port.)

When omitted, **active** will be set.

Requirement/Note

This command cannot be executed to the LAG of Multi Traffic Aggregation.

Up to three ports can be assigned to one LAG.

Entry Example

```
No.001@1(config-lag)# port eth 0/2
No.001@1(config-lag)# port eth 0/2 standby
No.001@1(config-lag)# port eth 0/2 active
```

Relative Commands

lag configuration
no lag configuration
show lag information
no port (LAG)
no name (LAG)
name (LAG)
mode

no mode
rule
no rule

no port (LAG)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command removes the LAG settings.

Format

`no port` P1 P2

Parameters

P1 = **eth**

Enter **eth** to select an Ethernet Port.

P2 = < interface ID >

Specifies (an) interface ID(s) to select. Multiple entries are available.

Requirement/Note

This command cannot be executed to the LAG of Multi Traffic Aggregation.

At least one port must be required to configure one LAG.

If the remaining (unselected) ports are all **standby** ports, this command cannot be executed. (You must leave a **active** port).

To remove a LAG itself, execute **no lag configuration** command.

Entry Example

```
No.001@1(config-lag)# no port eth 0/2
No.001@1(config-lag)# no port eth 0/2,0/3
```

Relative Commands

lag configuration
no lag configuration
show lag information
port (LAG)
no name (LAG)
name (LAG)
mode
no mode
rule
no rule

name (LAG)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command removes the LAG settings.

Format

`name` P1

Parameters

P1 = < name >

Specifies a name to a Link Aggregation Group (LAG). 0 to 32 characters long can be entered.

Default Value: `NULL`

Requirement/Note

Prior to executing this command, at least one port must be assigned to the LAG. (Assign ports using **port** command.)

Entry Example

No.001@1(config-lag)# **`name LAG_1`**

Relative Commands

lag configuration
no lag configuration
show lag information
port (LAG)
no port (LAG)
no name (LAG)
mode
no mode
rule
no rule

no name (LAG)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command specifies an LAG name.

Format

```
no name
```

Parameters

None.

Requirement/Note

None.

Entry Example

No.001@1(config-lag)# `no name`

Relative Commands

lag configuration
no lag configuration
show lag information
port (LAG)
no port (LAG)
name (LAG)
mode
no mode
rule
no rule

mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command specifies the LAG operating mode.

Format

`mode` {P1 P2 | P3 P4}

Parameters

P1 = {**`lacp-active`** | **`lacp-passive`**}

lacp-active: Enables the use of LACP, and sets a port to LACP active negotiation mode, which enables the port to negotiate with other ports by sending LACP.

lacp-passive: Enable the use of LACP, and sets a port to LACP passive negotiation mode, which makes a port to respond to the received LACP. In this mode, the port does not output LACP by itself.

When this parameter is specified (enables LACP), the setting of this parameter at the opposing site must also be specified.

Default Value: `lacp-active`

P2 = {**`short`** | **`long`**}

short: Sets LACPDU output cycle for 1 second.

long: Sets LACPDU output cycle for 30 seconds.

Default Value: `short`

P3 = **`static`**

Disables the use of LACP. When this parameter is specified, the setting of this parameter at the opposing site must also be specified.

P2 = {**`revertive`** | **`non-revertive`**}

revertive: Automatically switches back to the link when recovered from the link failure.

non-revertive: The standby link keeps operating though recovered from the link failure. To switch the link back, a user should execute the switching command manually.

Requirement/Note

Prior to executing this command, at least one port must be assigned to the LAG. (Assign ports using **port** command.)
This command cannot be executed to the LAG of Multi Traffic Aggregation.

◆Using LACP

When using the LACP, the following combinations are available:

- Local Site: **lacp-active** ⇔ Opposing Site: **lacp-active**
- Local Site: **lacp-active** ⇔ Opposing Site: **lacp-passive**
- Local Site: **lacp-passive** ⇔ Opposing Site: **lacp-active**

◆Using No LACP

When not using the LACP, the following is the only available combination:

- Local Site: **static** ⇔ Opposing Site: **static**

Entry Example

```
No.001@1(config-lag)# mode lacp-active short
No.001@1(config-lag)# mode lacp-active long
No.001@1(config-lag)# mode lacp-passive short
No.001@1(config-lag)# mode lacp-passive long
No.001@1(config-lag)# mode lacp-static revertive
No.001@1(config-lag)# mode lacp-static non-revertive
```

Relative Commands

lag configuration
no lag configuration
show lag information
port (LAG)
no port (LAG)
no mode

no mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command removes the LAG operating mode setting.

Format	`no mode`
Parameters	None.
Requirement/Note	This command cannot be executed to the LAG of Multi Traffic Aggregation.
Entry Example	No.001@1(config-lag)# `no mode`
Relative Commands	**lag configuration** **no lag configuration** **show lag information** **port (LAG)** **no port (LAG)** **mode**

rule

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command specifies the rule to sort the LAG.

Format

`rule` P1

Parameters

P1 = {`l2-base` | `l3-base` | `mpls-base`}

l2-base: Uses Source MAC Address, Destination MAC Address, VLAN ID, Ethernet type and Input Port to sort LAG.

l3-base: Uses Source IP Address, Destination IP Address, Source TCP/UDP Port number, and Destination TCP/UDP Port number to sort LAG.

mpls-base: Uses MPLS Label to sort LAG.

Default Value: `l2-base`

Requirement/Note

Prior to executing this command, at least one port must be assigned to the LAG. (Assign ports using **port** command.)
This command cannot be executed to the LAG of Multi Traffic Aggregation.

Entry Example

```
No.001@1(config-lag)# rule l2-base
No.001@1(config-lag)# rule l3-base
No.001@1(config-lag)# rule mpls-base
```

Relative Commands

lag configuration
no lag configuration
show lag information
port (LAG)
no port (LAG)
no rule

no rule

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: LAG Configuration Mode

This command removes the rule setting to sort the LAG.

Format	`no rule`
Parameters	None.
Requirement/Note	This command cannot be executed to the LAG of Multi Traffic Aggregation.
Entry Example	No.001@1(config-lag)# `no rule`
Relative Commands	**lag configuration** **no lag configuration** **show lag information** **port (LAG)** **no port (LAG)** **rule**

4.3.1.5 QoS/Classification Setting

qos class mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command switches the mode to Classification mode.

Format

```
qos class mode P1
```

Parameters

P1 = {**equipment** | **port** | **vlan**}

equipment: Specifies to set the QoS Classification per equipment.

port: Specifies to set the QoS Classification per port.

vlan: Specifies to set the QoS Classification per VLAN.

Default Value: `equipment`

Requirement/Note

When the Classification Mode is modified, following settings are automatically restored to the default:

- qos class map
- qos class default-priority
- qos overwrite

Entry Example

```
No.001@1(config)# qos class mode equipment
No.001@1(config)# qos class mode port
No.001@1(config)# qos class mode vlan
```

Relative Commands

no qos class mode
qos class map
no qos class map
qos class default-priority
no qos class default-priority
qos overwrite
no qos overwrite
show qos class config

no qos class mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the QoS Class Mode settings

Format

```
no qos class mode
```

Parameters

None.

Requirement/Note

When the Classification Mode is modified, following settings are automatically restored to the default:

- qos class map
- qos class default-priority
- qos overwrite

Entry Example

No.001@1(config)# `no qos class mode`

Relative Commands

qos class mode
qos class map
no qos class map
qos class default-priority
no qos class default-priority
qos overwrite
no qos overwrite
show qos class config

qos class map

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the Classification mappings.

Format

`qos class map` {P1 P2 | {P3 P4 P5 | P6 P7} {P8 | P9 | P10 P11}}

Parameters

P1 = **`equipment`**

Sets the equipment as the Classification object. This parameter can be entered only when the QoS Class Mode (**qos class mode**) specifies **equipment**.

When this parameter is filled, parameters P3 to P7 will be voided though entered.

P2 = {**`transparent`** | **`table-mapping`**}

transparent: Uses the CoS as the equipment internal priority.

table-mapping: Maps the equipment internal priority according to the Classification Profile.

Default Value: `transparent`

P3 = **`port`**

Specifies a port to operate the Classification. This parameter can be entered only when the QoS Class Mode (**qos class mode**) specifies **port**.

When this parameter is filled, parameters P1, P2, P6 and P7 will be ignored (cannot be specified).

P4 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is Ethernet Port.

modem: Selected port is MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

P5 = < interface ID >

Specifies the interface ID(s) to operate the Classification. Multiple entries are available.

P6 = **`vlan`**

Specifies a VLAN to operate the Classification. This parameter can be entered only when the QoS Class Mode (**qos class mode**) specifies **port**.

When this parameter is filled, parameters P1 to P5 will be ignored (cannot be specified).

P7 = **`1`** *to* **`4094`**

Specifies the VLAN ID(s) to operate the Classification. Multiple entries are available

P8 = **`transparent`**

Sets to use the CoS as the equipment internal priority.

P9 = **`fixed`**

Sets to use the Default Priority as the equipment internal priority.

P10 = **`table-mapping`**

Sets to map the equipment internal priority according to the Classification Profile.

P11 = **`1`** *to* **`16`**

Applies the Index number.

Requirement/Note

The values of P1 (**equipment**), P3 (**port**), or P6 (**vlan**) must be the same object that is specified by Qos Class Mode (**qos class mode**) P1: When the **qos class mode** specifies **equipment**, neither **port** nor **vlan** can be selected here; When the **qos class mode** specifies **port**, neither **equipment** nor **vlan** can be selected here; When the **qos class mode** specifies **vlan**, neither **equipment** nor **port** can be selected here.

Entry Example

```
No.001@1(config)# qos class map equipment transparent
No.001@1(config)# qos class map port modem 1/1 fixed
No.001@1(config)# qos class map vlan 100 transparent
```

Relative Commands

qos class mode
no qos class mode
no qos class map
qos class default-priority
no qos class default-priority
qos overwrite
no qos overwrite
show qos class config

no qos class map

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the settings of Classification mappings.

Format

`no qos class map` {P1 | P2 [P3 P4] | P5 [P6]}

Parameters

P1 = **`equipment`**

Selects the equipment to restore its Classification settings.

P2 = **`port`**

Selects the port to restore its Classification settings.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to restore its Classification settings.

P6 = **`1`** *to* **`4094`**

Specifies the VLAN ID(s) of the target. Multiple entries are available.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos class map equipment
No.001@1(config)# no qos class map port eth 0/2
No.001@1(config)# no qos class map vlan 100
```

Relative Commands

qos class mode
no qos class mode
qos class map
qos class default-priority
no qos class default-priority
qos overwrite
no qos overwrite
show qos class config

qos class default-priority

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the Default Priority.

Format

`qos class default-priority` {P1 | P2 P3 P4 | P5 P6} P7 P8

Parameters

P1 = **`equipment`**

Selects the equipment to set the Default Priority. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **equipment**.

P2 = **`port`**

Selects the port to set the Default Priority. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **port**.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to set the Default Priority. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **vlan**.

P6 = **1** *to* **4094**

Specifies the VLAN ID(s) of the target. Multiple entries are available.

P7 = **priority**

Enter priority to specify the Default Priority.

P8 = **0** *to* **7**

Specifies the priority.

Default Value: 0

Requirement/Note

The values of P1 (**equipment**), P2 (**port**), or P5 (**vlan**) must be the same object that is specified by Qos Class Mode (**qos class mode**) P1: When the **qos class mode** specifies **equipment**, neither **port** nor **vlan** can be selected here; When the **qos class mode** specifies **port**, neither **equipment** nor **vlan** can be selected here; When the **qos class mode** specifies **vlan**, neither **equipment** nor **port** can be selected here.

Entry Example

```
No.001@1(config)# qos class default-priority equipment
priority 7
No.001@1(config)# qos class default-priority port eth 0/2
priority 0
No.001@1(config)# qos class default-priority vlan 100
priority 5
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
no qos class default-priority
qos overwrite
no qos overwrite
show qos class config

no qos class default-priority

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the Default Priority settings.

Format

`no qos class default-priority` {P1 | P2 [P3 P4] | P5 [P6]} P7 P8

Parameters

P1 = **`equipment`**

Selects the equipment to restore its Default Priority settings.

P2 = **`port`**

Selects the port to restore its Default Priority.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to restore its Default Priority.

P6 = **`1`** *to* **`4094`**

Specifies the VLAN ID(s) of the target. Multiple entries are available.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos class default-priority equipment
No.001@1(config)# no qos class default-priority port eth 0/2
No.001@1(config)# no qos class default-priority vlan 100
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
qos class default-priority
qos overwrite
no qos overwrite
show qos class config

qos overwrite

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the overwrite settings.

Format

`qos overwrite` {P1 | P2 P3 P4 | P5 P6} P7

Parameters

P1 = **`equipment`**

Selects the equipment to specify overwrite settings. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **equipment**.

P2 = **`port`**

Selects the port to specify overwrite settings. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **port**.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to specify its overwrite settings. This parameter can be specified only when the QoS Class Mode (**qos class mode**) specifies **vlan**.

P6 = **1** *to* **4094**

Specifies the VLAN ID(s) of the target. Multiple entries are available.

P7 = {**enable** | **disable**}

enable: Enables the overwrite settings, which allows the equipment internal priority following the Classification to overwrite the priority value of the output frame.

disable: Disables the overwrite settings where the priority value of output frame is not overwritten.

Default Value: disable

Requirement/Note

The values of P1 (**equipment**), P2 (**port**), or P5 (**vlan**) must be the same object that is specified by Qos Class Mode (**qos class mode**) P1: When the **qos class mode** specifies **equipment**, neither **port** nor **vlan** can be selected here; When the **qos class mode** specifies **port**, neither **equipment** nor **vlan** can be selected here; When the **qos class mode** specifies **vlan**, neither **equipment** nor **port** can be selected here.

Overwriting process is carried out at the input port side. Specify the port to which the frame whose priority to be overwritten is input.

Entry Example

```
No.001@1(config)# qos overwrite equipment enable
No.001@1(config)# qos overwrite port eth 0/2 enable
No.001@1(config)# qos overwrite vlan 100 disable
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
qos class default-priority
no qos class default-priority
no qos overwrite
show qos class config

no qos overwrite

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the overwriting settings.

Format

`no qos overwrite` {P1 | P2 [P3 P4] | P5 [P6]}

Parameters

P1 = **`equipment`**

Selects the equipment to restore its overwriting settings.

P2 = **`port`**

Selects the port to restore its overwriting settings.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

When omitted, all ports are selected.

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to restore its overwriting settings.

P6 = **`1`** *to* **`4094`**

Selects the VLAN ID(s) of the target. Multiple entries are available.

When omitted, all the VLANs are selected.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos overwrite equipment
No.001@1(config)# no qos overwrite port eth 0/2
No.001@1(config)# no qos overwrite vlan 100
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
qos class default-priority
no qos class default-priority
qos overwrite
show qos class config

show qos class config

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Classification settings.

Format

`show qos class config` [{P1 | P2 [P3 P4] | P5 [P6]}]

Parameters

P1 = **`equipment`**

Selects the equipment to retrieve its Classification settings.

When omitted, all the ports of **equipment**, **port**, and **vlan** are selected.

P2 = **`port`**

Selects the port to retrieve its Classification settings.

P3 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selected port is an Ethernet Port.

modem: Selected port is a MODEM Port.

lag-eth: Selected port is assigned to Link Aggregation Group (LAG).

lag-multi: Selected port is assigned to Multi Traffic Aggregation (MTA).

When omitted, all ports are selected.

P4 = < interface ID >

Selects the interface ID(s) of the target. Multiple entries are available.

P5 = **`vlan`**

Selects the VLAN to retrieve its Classification settings.

P6 = **`1`** *to* **`4094`**

Selects the VLAN ID(s) of the target. Multiple entries are available.

When omitted, all the VLANs are selected.

Requirement/Note

None.

Entry Example

```
No.001@1# show qos class config equipment
No.001@1# show qos class config port eth 0/2
No.001@1# show qos class config vlan 100
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
qos class default-priority
no qos class default-priority
qos overwrite
no qos overwrite

qos class profile configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command switches the mode to the QoS Classification Profile Configuration.

Format

`qos class profile configuration` {P1 | P2 P3 | P4 P5}

Parameters

P1 = **`equipment`**

Selects the Classification Profile for equipment.

P2 = **`port`**

Selects the Classification Profile for port.

P3 = **`1`** *to* **`16`**

Selects the index number.

P4 = **`vlan`**

Selects the Classification Profile for VLAN.

P5 = **`1`** *to* **`16`**

Specifies the index number.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# qos class profile configuration equipment
No.001@1(config-class_map)# exit
No.001@1(config)# qos class profile configuration port 1
No.001@1(config-class_map)# exit
No.001@1(config)# qos class profile configuration vlan 16
No.001@1(config-class_map)# exit
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
no qos class profile configuration
show qos class profile
name (class-map)
no name (class-map)
class
no class
priority-mapping
no priority-mapping

no qos class profile configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command restore the Classification Profile setting to default.

Format

`no qos class profile configuration` [{P1 | P2 [P3] | P4 [P5]}

Parameters

P1 = **`equipment`**

Selects the equipment to restore its Classification Profile.

When omitted, all the profiles are selected.

P2 = **`port`**

Selects the port to restore its Classification Profile.

P3 = **`1`** *to* **`16`**

Selects the index number of the target.

When omitted, all the port profiles are selected.

P4 = **`vlan`**

Selects the VLAN to restore its Classification Profile.

P5 = **`1`** *to* **`16`**

Selects the index number of the target.

When omitted, all the VLAN profiles are selected.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos class profile configuration equipment
No.001@1(config)# no qos class profile configuration port 1
No.001@1(config)# no qos class profile configuration vlan 16
No.001@1(config)# no qos class profile configuration vlan
```

Relative Commands

qos class mode
no qos class mode
qos class map
no qos class map
qos class profile configuration
show qos class profile
name (class-map)
no name (class-map)
class
no class
priority-mapping
no priority-mapping

show qos class profile

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Classification Profile settings.

Format

`show qos class profile` [{P1 | P2 [P3] | P4 [P5]}]

Parameters

P1 = **`equipment`**

Selects the equipment to retrieve its Classification Profile setting.

When omitted, the information for all equipment, port and VLAN are retrieved.

P2 = **`port`**

Selects the port to retrieve its Classification Profile setting.

P3 = **`1`** *to* **`16`**

Selects the index number of the target.

When omitted, the information of all ports are retrieved.

P4 = **`vlan`**

Selects the VLAN to retrieve its Classification Profile setting.

P5 = **`1`** *to* **`16`**

Selects the index number of the target.

When omitted, the information for all ports are retrieved.

Requirement/Note

None.

Entry Example

```
No.001@1# show qos class profile equipment
No.001@1# show qos class profile
```

Relative Commands

qos class profile configuration
no qos class profile configuration
name (class-map)
no name (class-map)
class
no class
priority-mapping
no priority-mapping

name (class-map)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command specifies the Classification Profile name.

Format

```
name P1
```

Parameters

P1 = < name >

Enter a name within 0 to 32 characters long.

Default Value: NULL

Requirement/Note

None.

Entry Example

```
No.001@1(config-class_map)# name class-prof_01
```

Relative Commands

qos class profile configuration
no qos class profile configuration
no name (class-map)
show qos class profile

no name (class-map)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command removes the Classification Profile name.

Format

```
no name
```

Parameters

None.

Requirement/Note

None.

Entry Example

No.001@1(config-class_map)# **no name**

Relative Commands

qos class profile configuration
no qos class profile configuration
name (class-map)
show qos class profile

class

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command specifies the Classification Field settings.

Format

`class` P1

Parameters

P1 = {`cos` | `tc` | `dscp`}

cos: Uses VLAN (CoS) of received frame for Classification.

tc: Uses MPLS (Traffic Class) of received packet for Classification.

dscp: Uses IP Address (DSCP) of received packet for Classification.

Default Value: `cos`

Requirement/Note

Following combinations of Classification Profiles are available:

- Equipment Profile: **cos**, **tc**, **dscp**
- Port Profile: **cos**, **tc**, **dscp**
- VLAN Profile: **cos**

When the settings are modified by this command, the Priority Mapping table will automatically be restored to default.

Entry Example

```
No.001@1(config-class_map)# class cos
No.001@1(config-class_map)# class tc
No.001@1(config-class_map)# class dscp
```

Relative Commands

qos class profile configuration
no qos class profile configuration
no class
priority-mapping
no priority-mapping
show qos class profile

no class

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command removes the Classification Field settings.

Format	`no class`
Parameters	None.
Requirement/Note	When the settings are modified by this command, the Priority Mapping table will automatically be restored to default.
Entry Example	No.001@1(config-class_map)# `no class`
Relative Commands	**qos class profile configuration** **no qos class profile configuration** **class** **priority-mapping** **no priority-mapping** **show qos class profile**

priority-mapping

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command implements the Priority Mapping Table for priorities of received frames (CoS, Traffic Class, DSCP) and the equipment internal priorities.

Format

`priority-mapping` P1 P2 P3 [P4]

Parameters

P1 = **`0`** *to* **`63`**

Specifies the priority of incoming frames:

For DSCP = **0** to **63**
For CoS or Traffic Class (tc) = **0** to **7**

Multiple entries are available.

Default Value: *(see the table below)*

P2 = **`to`**

Enter **`to`** to map the priority P1 to priority P3.

P3 = **`0`** *to* **`7`**

Specifies the priority of internal use frames to map.

Default Value: *(see the table below)*

P4 = {**`green`** | **`yellow`**}

green: The priority is mapped to Color Green.

yellow: The priority is mapped to Color Yellow.

Default Value: `green`

Default Value:

CoS / TC	Priority	Color
7	7	green
6	6	green
5	5	green
4	4	green
3	3	green
2	2	green
1	1	green
0	0	green

DSCP	Priority	Color
56 *to* 63	7	green
48 *to* 55	6	green
40 *to* 47	5	green
32 *to* 39	4	green
24 *to* 31	3	green
16 *to* 23	2	green
8 *to* 15	1	green
0 *to* 7	0	green

Requirement/Note

Classification Profile has the following restrictions:

- Equipment Profile: Color is green (fixed value, cannot be changed).
- Port Profile: Either color is available.
- VLAN Profile: Color is green (fixed value, cannot be changed).

The Priority values 8 to 63 cannot be selected when the Classification target is CoS or Traffic Class (tc).

Entry Example

```
No.001@1(config-class_map)# priority-mapping 5 to 0
No.001@1(config-class_map)# priority-mapping 0-2,4,6 to 0
No.001@1(config-class_map)# priority-mapping 4 to 4 green
No.001@1(config-class_map)# priority-mapping 7 to 7 yellow
```

Relative Commands

qos class profile configuration
no qos class profile configuration
class
no class
no priority-mapping
show qos class profile

no priority-mapping

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Classification Profile Mode

This command restore the Priority Mapping Table settings to default.

Format

`no priority-mapping` [P1]

Parameters

P1 = `0` *to* `63`

Specifies the priority.
For CoS and Traffic Class (cs), available values are 0 to 7.
For DSCP, available values are 0 to 63.
Multiple entries are available.
When omitted, all the priorities are selected.

Requirement/Note

None.

Entry Example

No.001@1(config-class_map)# `no priority-mapping 5`

Relative Commands

qos class profile configuration
no qos class profile configuration
class
no class
priority-mapping
show qos class profile

qos policer entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Policer Profile.

Format

`qos policer entry` P1 [[P2 P3] [P4 P5]] P6 P7

Parameters

P1 = **`1`** *to* **`256`**

Select a Policer Index number.

P2 = **`vlan`**

Enter **vlan** to set a Policer per VLAN.

P3 = **`1`** *to* **`4094`**

Select a VLAN by entering its VLAN ID.
Cannot specify the Default VLAN.
When omitted, all VLANs are selected.

P4 = **`priority`**

Enter **priority** to set a Policer per priority.

P5 = **`0`** *to* **`7`**

Enter a number of the target priority.
When omitted, all priorities are selected.

P6 = **`profile`**

Enter **profile** to provide profile numbers.

P7 = **`1`** *to* **`64`**

Enter a Profile number to specify the Profile

Requirement/Note

This setting and Broadcast Strom Control setting cannot share the same port.

Identical values with different Index number cannot be specified to the same port.

When both the VLAN and priority settings are omitted, the function is enabled as Port Policer.

Policer Index numbers are managed per equipment (not per port). Executing the same Index number to the different port overwrites the settings.

Entry Example

```
No.001@1(config-if)# qos policer entry 1 profile 1
No.001@1(config-if)# qos policer entry 128 vlan 1 profile 8
No.001@1(config-if)# qos policer entry 256 priority 0 profile
12
No.001@1(config-if)# qos policer entry 200 vlan 4094 priority
7 profile 16
```

Relative Commands

no qos policer entry
qos policer profile
no qos policer profile
show qos policer entry

no qos policer entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Policer Profile settings.

Format

`no qos policer entry` [P1 [[P2] [P3]]]

Parameters

P1 = **`1`** *to* **`256`**

Select (a) Policer Index number(s). Multiple entries are available.

When omitted, all the policers are selected.

P2 = **`vlan`**

Enter **vlan** to remove all the Policer per VLAN settings.

Cannot select **vlan** when the multiple Policer Index numbers are selected.

P3 = **`priority`**

Enter **priority** to remove all the Policer per priority settings.

Cannot select **priority** when the multiple Policer Index numbers are selected.

Requirement/Note

When the multiple Policer Index numbers are selected, **vlan** and **priority** cannot be selected.

Identical values with the different Index number cannot be specified to the same port.

Entry Example

```
No.001@1(config-if)# no qos policer entry 1 vlan priority
No.001@1(config-if)# no qos policer entry 5 vlan
No.001@1(config-if)# no qos policer entry 7 priority
No.001@1(config-if)# no qos policer entry 9
No.001@1(config-if)# no qos policer entry 11, 13-15
No.001@1(config-if)# no qos policer entry
```

Relative Commands

qos policer entry
qos policer profile
no qos policer profile
show qos policer entry

show qos policer entry

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Policer Profile settings.

Format

`show qos policer entry` [P1 P2]

Parameters

P1 = {`eth` | `modem` | `lag-eth` | `lag-multi`}

eth: The target port is an Ethernet Port.
modem: The target port is a MODEM Port.
lag-eth: The target port belongs to Link Aggregation Group (LAG).
lag-multi: The target port belongs to Multi Traffic Aggregation (MTA).
When omitted, all ports are selected.

P2 = < interface ID >

Enter the target interface ID. Multiple entries are available.

Requirement/Note

None.

Entry Example

No.001@1# `show qos policer entry`

Relative Commands

qos policer entry
no qos policer entry

qos policer profile

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the detailed Policer Profile settings.

Format

`qos policer profile` P1 P2 P3 P4 P5 P6 P7 P8 P9

Parameters

P1 = **`1`** *to* **`64`**

Select the Policer Profile Index number.

P2 = **`eir`**

Enter **eir** to specify Excess Information Rate (EIR).

P3 = **`0`** *to* **`10000000`**

Specifies the Excess Information Rate. (unit = kbit/s)

Default Value: `1000000`

P4 = **`cir`**

Enter **cir** to specify Committed Information Rate (CIR).

P5 = **`0`** *to* **`10000000`**

Specifies the Committed Information Rate. (unit = kbit/s)

Default Value: `0`

P6 = **`ebs`**

Enter **ebs** to specify Excess Burst Size (EBS).

P7 = **`0`** *to* **`128`**

Specifies the Excess Burst Size. (unit = k byte)

Default Value: `0`

P8 = **cbs**

Enter **cbs** to specify Committed Burst Size (CBS).

P9 = **0** *to* **64**

Specifies the Committed Burst Size. (unit = k byte)

Default Value: 24

Requirement/Note

None.

Entry Example

```
No.001@1(config)# qos policer profile 8 eir 100000 cir 8000
ebs 64 cbs 32
```

Relative Commands

qos policer entry
no qos policer entry
no qos policer profile
show qos policer profile

no qos policer profile

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the detailed Policer Profile settings.

Format

```
no qos policer profile [P1]
```

Parameters

P1 = `1` *to* `64`

Specifies the Policer Profile Index number(s) to remove. Multiple entries are available.

When omitted, all the Policer Profiles are selected.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos policer profile 1
No.001@1(config)# no qos policer profile 3-8
No.001@1(config)# no qos policer profile
```

Relative Commands

qos policer entry
no qos policer entry
qos policer profile
show qos policer profile

show qos policer profile

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Policer Profile settings.

Format

`qos policer profile` [P1]

Parameters

P1 = `1` *to* `64`

Specifies the Policer Profile Index number(s) to retrieve the information. Multiple entries are available.

When omitted, all the Policer Profiles are selected.

Requirement/Note

None.

Entry Example

No.001@1# `show qos policer profile`

Relative Commands

qos policer profile
no qos policer profile

qos shaper queue-number

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the number of Shaper Classes.

Format

```
qos shaper queue-number P1
```

Parameters

P1 = {**4-class** | **8-class**}

4: Specifies that the number of Shaper Classes is four. Selecting **4-class** enables eight Shaper Groups including the Remaining Groups.

8: Specifies that the number of Shaper Classes is eight. Selecting **8-class** enables four Shaper Groups including the Remaining Groups.

Default Value: `8-class`

Requirement/Note

If the number of QoS Classes is changed, the following settings are restored to default:

- Shaper Profile Assignments
- VLAN Shaper Settings
- Scheduler Settings
- VLAN Group Settings

The priority in each mode is defined according to the following table:

Priority	8-Class	4-Class
7	7	3
6	6	3
5	5	2
4	4	2
3	3	1
2	2	1
1	1	0
0	0	0

Entry Example

```
No.001@1(config)# qos shaper queue-number 4-class
No.001@1(config)# qos shaper queue-number 8-class
```

Relative Commands

no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
show qos shaper equipment config
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

no qos shaper queue-number

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the number of Shaper Classes setting.

Format

```
no qos shaper queue-number
```

Parameters

None.

Requirement/Note

If the number of QoS Classes is changed, the following settings are restored to default:

- Shaper Profile Assignments
- VLAN Shaper Settings
- Scheduler Settings
- VLAN Group Settings

Entry Example

```
No.001@1(config)# no qos shaper queue-number
```

Relative Commands

qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
show qos shaper equipment config
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

qos shaper vlan-mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command enables/disables the VLAN Shaper settings.

Format

```
qos shaper vlan-mode P1
```

Parameters

P1 = {**enable** | **disable**}

enable: Enables the VLAN Shaper settings.

disable: Disables the VLAN Shaper settings.

Default Value: `disable`

Requirement/Note

This command cannot be executed if the Software Key of H-QoS is properly applied.

When the VLAN Mode of QoS is changed from **enable** to **disable**, the following settings are restored to default automatically:

- Shaper Profile Assignments
- VLAN Shaper Settings
- Scheduler Settings
- VLAN Group Settings

Entry Example

```
No.001@1(config)# qos shaper vlan-mode enable
No.001@1(config)# qos shaper vlan-mode disable
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
no qos shaper vlan-mode
show qos shaper equipment config
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

no qos shaper vlan-mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the VLAN Shaper settings.

Format

```
no qos shaper vlan-mode
```

Parameters

None.

Requirement/Note

When the VLAN Mode of QoS is changed, the following settings are restored to default automatically:

- Shaper Profile Assignments
- VLAN Shaper Settings
- Scheduler Settings
- VLAN Group Settings

Entry Example

No.001@1(config)# **no qos shaper vlan-mode**

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
show qos shaper equipment config
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

show qos shaper equipment config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of VLAN Shaper settings.

Format	`show qos shaper equipment config`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1# `show qos shaper equipment config`
Relative Commands	**qos shaper queue-number** **no qos shaper queue-number** **qos shaper vlan-mode** **no qos shaper vlan-mode**

qos shaper group

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command creates the VLAN Shaper Groups.

Format

`qos shaper group` {P1 P2 P3 | P4 P5 P6}

Parameters

P1 = **`1`** *to* **`7`**

Select a number of Shaper Group ID to which VLAN is to be assigned.

When the QoS Class is set to **8-class**, the values **4** to **7** cannot be specified here.

P2 = **`vlan`**

Enter **vlan** to set VLAN mapping.

P3 = **`1`** *to* **`4094`**

Select (a) VLAN ID(s) of the target VLAN(s). Multiple entries are available.

Cannot enter the number of unregistered VLAN ID here.

P4 = **`remaining`**

Enter **remaining** to select the Remaining Group.

P5 = **`vlan`**

Enter **vlan** to set VLAN mapping.

P6 = **`other`**

Enter **other** to specify the Remaining Group property.

Requirement/Note

When the VLAN Mode of QoS is disabled, this command cannot be executed.

VLANs that are not mapped to the Shaper Groups are all assigned to the Remaining Group. Newly registered VLANs after this setting will be also assigned to the Remaining Group.

Entered values of parameters P4, P5, and P6 are displayed in the information retrieved by the command show running-config, which shows that there are VLANs that belong to the Shaper Group(s) other than Remaining Group.

Executing this command with the parameters P4, P5 and P6 can still be completed successfully, however, its settings are not specified at the equipment side.

Entry Example

```
No.001@1(config)# qos shaper group 1 vlan 100
No.001@1(config)# qos shaper group 7 vlan 1-10,50
No.001@1(config)# qos shaper group remaining vlan other
```

Relative Commands

vlan
no-vlan
qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
no qos shaper group
show qos shaper group config
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

no qos shaper group

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the VLAN mapping settings to Shaper Groups.

Format

`no qos shaper group` [P1 [P2 P3]]

Parameters

P1 = **`1`** *to* **`7`**

Select a number of Shaper Group ID to remove.

When omitted, all VLANs that are assigned to any Shaper Groups are selected.

P2 = **`vlan`**

Enter **vlan** to provide VLAN ID parameter.

P3 = **`1`** *to* **`4094`**

Select (a) VLAN ID(s) of the VLAN(s) that are to be assigned to the Remaining Group. Multiple entries are available.

Cannot specify the unregistered VLAN ID here.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos shaper group 1 vlan 100
No.001@1(config)# no qos shaper group 7
No.001@1(config)# no qos shaper group
```

Relative Commands

vlan
no-vlan
qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group

show qos shaper group config
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

show qos shaper group config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the VLAN mapping settings to Shaper Groups.

Format

```
show qos shaper group config [{P1|P2}]
```

Parameters

P1 = `1` *to* `7`

Select a number of Shaper Group ID to retrieve.

When omitted, all VLANs that are assigned to any Shaper Groups are selected.

P2 = `remaining`

Enter **remaining** to select the Remaining Group to retrieve.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# show qos shaper group 1 vlan 100
No.001@1(config)# show qos shaper group 7
No.001@1(config)# show qos shaper group
```

Relative Commands

vlan
no-vlan
qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper scheduler
no qos shaper scheduler
qos shaper queue entry
no qos shaper queue entry

qos shaper

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Shaper rate.

Format

`qos shaper` {P1 {P2 | P3} [P4 P5] [P6 P7] | P8 P9 P10}

Parameters

P1 = **`group`**

Enter **group** to provide the Shaper Group ID parameter.

P2 = **`1`** *to* **`7`**

Select a number of Shaper Group ID to set the rate.

When the VLAN Mode of QoS is disabled, this parameter is voided.

When the QoS Class selects 8-Class, values **4** to **7** cannot specified here.

P3 = **`remaining`**

Enter **remaining** to provide the Remaining Group parameter.

P4 = **`max`**

Enter **max** to provide the maximum bandwidth rate parameter.

P5 = **`1`** *to* **`10000`**

Specifies the maximum bandwidth rate of VLAN Shaper.
(unit = Mbit/s)

Default Value: `1000` *(GbE Port)*
`10000` *(10GbE Port)*
`1000` *(MODEM Port)*

P6 = **`min`**

Enter **min** to provide the minimum bandwidth guaranteed rate parameter.

P7 = **0** *to* **10000**

Specifies the maximum bandwidth guaranteed rate of VLAN Shaper. (unit = Mbit/s)

P8 = **port**

Enter **port** to provide the port shaper parameters.

P9 = **max**

Enter **max** to provide the maximum bandwidth rate parameter.

P3 = **1** ***to*** **10000**

Specifies the maximum bandwidth rate of Port Shaper. (unit = Mbit/s)

Default Value: 1000 *(GbE Port)*
10000 *(10GbE Port)*
(Auto) (MODEM Port)

Requirement/Note

Port Shaper cannot be assigned to MODEM Port. For MODEM Port, most applicable Port Shaper is automatically assigned.

Entry Example

```
No.001@1(config-if)# qos shaper group 1 max 1 min 0
No.001@1(config-if)# qos shaper group 7 max 10000
No.001@1(config if)# qos shaper group remaining min 10000
No.001@1(config if)# qos shaper port min 1
No.001@1(config if)# qos shaper port max 10000
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
no qos shaper
show qos shaper port config

no qos shaper

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Shaper rate settings.

Format

`no qos shaper` {P1 {P2 | P3} | P4}

Parameters

P1 = `group`

Enter **group** to provide the Shaper Group ID parameter.

P2 = `1` *to* `7`

Select a number of Shaper Group ID to restore its VLAN Shaper to default.

P3 = `remaining`

Enter **remaining** to provide the Remaining Group parameter.

P4 = `port`

Enter **port** to restore its Port Shaper to default.

Requirement/Note

This command cannot be executed to MODEM Port.

Entry Example

```
No.001@1(config-if)# no qos shaper group 1
No.001@1(config-if)# no qos shaper group remaining
No.001@1(config-if)# no qos shaper port
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
qos shaper
show qos shaper port config

qos shaper scheduler

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Scheduler of VLAN Shaper.

Format

`qos shaper scheduler` P1 {P2 | P3} {P4 | P5 P6}

Parameters

P1 = `group`

Enter **group** to provide the Shaper Group ID parameter.

P2 = `1` *to* `7`

Select an ID number of Shaper Group to set its scheduler.

P3 = `remaining`

Enter **remaining** to provide the Remaining Group parameter.

P4 = `sp`

Enter **sp** to set Strict Priority (SP) for Scheduler setting, which accords the frame process of target Shaper priority over that of DWRR specified Shaper Group. (default)

P5 = `dwrr`

Enter **dwrr** to set Deficit Weighted Round Robin (DWRR) for Scheduler setting. The frame process is carried out according to the weight rate specified by P6.

P6 = `1` *to* `127`

Specify the weight rate value for the Shaper Group of DWRR.

Requirement/Note

When the VLAN Mode of QoS is disabled, this command cannot be executed.

When the QoS Class selects 8-Class, the Shaper Group values **4** to **7** cannot be specified.

Entry Example

```
No.001@1(config-if)# qos shaper scheduler group 1 sp
No.001@1(config-if)# qos shaper scheduler group 7 dwrr 1
No.001@1(config-if)# qos shaper scheduler group remaining
dwrr 127
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
no qos shaper scheduler
show qos shaper port config

no qos shaper scheduler

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Scheduler settings of VLAN Shaper.

Format

`no qos shaper scheduler` P1 {P2 | P3}

Parameters

P1 = `group`

Enter **group** to provide the Shaper Group ID parameter.

P2 = `1` *to* `7`

Select an ID number of Shaper Group to restore its scheduler settings to default.

P3 = `remaining`

Enter **remaining** to provide the Remaining Group parameter.

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# no qos shaper scheduler group 1
No.001@1(config-if)# no qos shaper scheduler group remaining
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
qos shaper scheduler
show qos shaper port config

qos shaper queue entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command specifies the Shaper Profiles.

Format

`qos shaper queue entry` P1 {P2 | P3} P4 {P5 | P6 | P7}

Parameters

P1 = **`group`**

Enter **group** to provide the Shaper Group ID parameter.

P2 = **`1`** *to* **`7`**

Select an ID number of Shaper Group to assign the VLAN Shaper Queue Profile.

When the QoS VLAN Mode is disabled, this parameter cannot be specified.

When the QoS Class selects 8-Class, the values **4** to **7** cannot be specified here.

P3 = **`remaining`**

Enter **remaining** to provide the Remaining Group parameter.

P4 = **`profile`**

Enter **profile**.

P5 = **`1`** *to* **`15`**

Select an Index number (created by **qos shaper queue-profile configuration**) of the target.

P6 = **`default-1g`**

Enter **default-1g** to specify the default profile for 1 GbE Port or MODEM Port.

P7 = **default-10g**

Enter **default-10g** to specify the default profile for 10 GbE Port.

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# qos shaper queue entry group 1 profile 1
No.001@1(config-if)# qos shaper queue entry group remaining
profile 3
No.001@1(config-if)# qos shaper queue entry group 3 profile
default-1g
No.001@1(config-if)# qos shaper queue entry group 7 profile
default-10g
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
no qos shaper queue entry
show qos shaper port config
qos shaper queue-profile configuration
no qos shaper queue-profile configuration

no qos shaper queue entry

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command restores the VLAN Shaper Queue Profile setting to default.

Format

```
no qos shaper queue entry P1 {P2|P3}
```

Parameters

P1 = **group**

Enter **group** to provide the Shaper Group ID parameter.

P2 = **1** *to* **7**

Select ID number of the target to restore its VLAN Shaper Queue Profile settings to default.

P3 = **remaining**

Enter **remaining** to provide the Remaining Group parameter.

Requirement/Note

None.

Entry Example

```
No.001@1(config-if)# no qos shaper queue entry group 1
No.001@1(config-if)# no qos shaper queue entry group
remaining
```

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
qos shaper queue entry
show qos shaper port config
qos shaper queue-profile configuration
no qos shaper queue-profile configuration

show qos shaper port config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Shaper Port setting.

Format

`show qos shaper port config` [P1 P2 [{P3 | P4}]]

Parameters

P1 = {**`eth`** | **`modem`** | **`lag-eth`** | **`lag-multi`**}

eth: Selects an Ethernet Port.

modem: Selects a MODEM Port.

lag-eth: Selects a port that belongs to Link Aggregation Group (LAG).

lag-multi: Selects a port that belongs to Multi Traffic Aggregation (MTA).

P2 = < interface ID >

Select (an) ID numbers of the target to retrieve its Shaper Port setting information.

P3 = **`1`** *to* **`7`**

Select a target Shaper Group ID.

P4 = **`remaining`**

Enter **remaining** to select the Remaining Group.

Requirement/Note

None.

Entry Example

No.001@1(config-if)# **`show qos shaper port config`**

Relative Commands

qos shaper queue-number
no qos shaper queue-number
qos shaper vlan-mode
no qos shaper vlan-mode
qos shaper group
no qos shaper group
qos shaper
no qos shaper
qos shaper queue entry
no qos shaper queue entry

qos shaper queue-profile configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command switches the mode to Shaper Queue Profile mode.

Format

```
qos shaper queue-profile configuration P1
```

Parameters

P1 = `1` *to* `15`

Select the VLAN Shaper Queue Profile to modify by entering its Profile Index number.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# qos shaper queue-profile configuration 1
No.001@1(config-queue_map)#
```

Relative Commands

no qos shaper queue-profile configuration
show qos shaper queue-profile
name (queue-map)
no name (queue-map)
drop-mode
no drop-mode
priority
no priority

no qos shaper queue-profile configuration

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command restores the settings of VLAN Shaper Queue Profile to default.

Format

```
no qos shaper queue-profile configuration [P1]
```

Parameters

P1 = `1` *to* `15`

Select the index number of the VLAN Shaper Queue Profile to restore. Multiple entries are available.

When omitted, all the profiles are selected.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no qos shaper queue-profile configuration 1
No.001@1(config)# no qos shaper queue-profile configuration 3-5
No.001@1(config)# no qos shaper queue-profile configuration
```

Relative Commands

qos shaper queue-profile configuration
show qos shaper queue-profile
name (queue-map)
no name (queue-map)
drop-mode
no drop-mode
priority
no priority

show qos shaper queue-profile

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Shaper Queue Profile settings.

Format

```
show qos shaper queue-profile [{P1|P2|P3}]
```

Parameters

P1 = `1` *to* `15`

Select the index number of the Shaper Queue Profile to retrieve its setting information. Multiple entries are available.

When omitted, all the profiles are selected.

P2 = `default-1g`

Enter **default-1g** to select the Shaper Queue Profile of default-1g.

P3 = `default-10g`

Enter **default-10g** to select the Shaper Queue Profile of default-10g.

Requirement/Note

None.

Entry Example

```
No.001@1# show qos shaper queue-profile 1
No.001@1# show qos shaper queue-profile 3-5
No.001@1# show qos shaper queue-profile default-10g
```

Relative Commands

qos shaper queue-profile configuration
no qos shaper queue-profile configuration
name (queue-map)
no name (queue-map)
drop-mode
no drop-mode
priority
no priority

name (queue-map)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command specifies the Shaper Queue Profile name.

Format

`name` P1

Parameters

P1 = < name >

Enter a Profile name within 0 to 32 characters long.

Default Value: `NULL`

Requirement/Note

None.

Entry Example

No.001@1(config-queue_map)# **`name shaper_queue_prof-1`**

Relative Commands

qos shaper queue-profile configuration
no qos shaper queue-profile configuration
no name (queue-map)
show qos shaper queue-profile

no name (queue-map)

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command removes the settings of the Shaper Queue Profile name.

Format	**`no name`**
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-queue_map)# **`no name`**
Relative Commands	**qos shaper queue-profile configuration** **no qos shaper queue-profile configuration** **name (queue-map)** **show qos shaper queue-profile**

drop-mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command specifies the method of discarding frames.

Format

```
drop-mode P1
```

Parameters

P1 = {**wtd** | **wred**}

wtd: Specifies Weighted Tail Drop (WTD) for the method to discard frames.

wred: Specifies Weighted Random Early Detection (WRED) for the method to discard frames.

Default Value: `wtd`

Requirement/Note

None.

Entry Example

```
No.001@1(config-queue_map)# drop-mode wtd
No.001@1(config-queue_map)# drop-mode wred
```

Relative Commands

qos shaper queue-profile configuration
no qos shaper queue-profile configuration
show qos shaper queue-profile
name (queue-map)
no name (queue-map)
no drop-mode
priority
no priority

no drop-mode

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command removes the settings for the method of discarding frames.

Format	`no drop-mode`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-queue_map)# `no drop-mode`
Relative Commands	**qos shaper queue-profile configuration** **no qos shaper queue-profile configuration** **show qos shaper queue-profile** **name (queue-map)** **no name (queue-map)** **drop-mode** **priority** **no priority**

priority

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command specifies the details of Shaper Queue settings.

Format

`priority` P1 [P2 [P3 P4] [P5 P6]] [P7 {P8|P9 P10}] [P11 P12] [P13 P14] [P15 P16] [P17 P18]

Parameters

P1 = **`0`** *to* **`7`**

Specifies the Service Class.

P2 = **`shaper`**

Enter **shaper** to specify the Shaper to the selected Service Class.

P3 = **`max`**

Enter **max** to specify the maximum bandwidths rate.

P4 = **`1`** *to* **`10000`**

Enter the maximum bandwidths rate. (unit = Mbit/s)

Default Value: `1000`

P5 = **`min`**

Enter **min** to specify the minimum bandwidths guaranteed rate.

P6 = **`0`** *to* **`10000`**

Enter the minimum bandwidths guaranteed rate. (unit = Mbit/s)

Default Value: `0`

P7 = **`scheduler`**

Enter **scheduler** to specify the Scheduler to the selected Service Class.

P8 = **sp**

Enter **sp** to specify the Strict Priority (**sp**) to the Scheduler of the selected Service Class. (Default)

P9 = **dwrr**

Enter **dwrr** to specify the Deficit Weighted Round Robin (**dwrr**) to the Scheduler of the selected Service Class.

P10 = **1** *to* **127**

Enter the weight value.

P11 = **length**

Enter **length** to specify the Egress Queue size for the Service Class.

P12 = **16** *to* **65536**

Enter the length value. (unit = k byte); the available value range differs depending on the state:

State [Mbyte]	Range of Values
2	**16** *to* **1024**
16	**16** *to* **16384**
64	**16** *to* **65536**

When the external packet buffer is disabled, the value greater than 1024 cannot be specified.

Default Value: 64

P13 = **wtd**

Enter **wtd** to specify the WTD (Weighted Tail Drop) threshold value to the Color Yellow.

P14 = **10** *to* **100**

Enter the (WTD) threshold value. (unit = %)

Default Value: 100

P15 = **wred-yellow**

Enter **wred yellow** to specify the Weighted Random Early Detection (WRED) Threshold value to Color Yellow.

P16 = **10** *to* **100**

Enter the WRED threshold value for the Color Yellow. (unit = %)

Default Value: 70

P17 = **wred-green**

Enter **wred green** to specify the Weighted Random Early Detection (WRED) Threshold value to Color Green.

P18 = **10** *to* **100**

Enter the WRED threshold value for the Color Green. (unit = %)

Default Value: 70

Requirement/Note

None.

Entry Example

```
No.001@1(config-queue_map)# priority 0 shaper max 1000
No.001@1(config-queue_map)# priority 1 shaper min 10
No.001@1(config-queue_map)# priority 2 scheduler dwrr 127
No.001@1(config-queue_map)# priority 3 length 64
No.001@1(config-queue_map)# priority 4 wtd 90
No.001@1(config-queue_map)# priority 5 wred-yellow 50 1000
No.001@1(config-queue_map)# priority 6 wred-green 80
No.001@1(config-queue_map)# priority 7 shaper max 1000 min
10 scheduler sp length 64 wtd 90 wred-yellow 50 wred-
green 80
```

Relative Commands

qos shaper queue-profile configuration
no qos shaper queue-profile configuration
show qos shaper queue-profile
name (queue-map)
no name (queue-map)
drop-mode
no drop-mode
no priority

no priority

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Shaper Queue Profile Mode

This command restores the Shaper Queue settings to default.

Format

```
no priority P1
```

Parameters

P1 = `0` *to* `7`

Select (a) Service Class(es) by priority number to restore its/their settings to default. Multiple entries are available.

Requirement/Note

None.

Entry Example

```
No.001@1(config-queue_map)# no priority 0
No.001@1(config-queue_map)# no priority 1-7
```

Relative Commands

qos shaper queue-profile configuration
no qos shaper queue-profile configuration
show qos shaper queue-profile
name (queue-map)
no name (queue-map)
drop-mode
no drop-mode
priority

4.3.1.6 Port Isolate Setting

isolate

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command adds the interface to the Port Isolate Groups where the Port Isolation is proceeded,

Format

`isolate` P1 P2 P3

Parameters

P1 = `1` *to* `32`

Enter a number to specify (an) Isolate Group Number.

P2 = {`eth` | `modem` | `lag-eth` | `lag-multi`}

eth: Specifies an Ethernet Port.

modem: Specifies a MODEM Port.

lag-eth: Specifies the port that belongs to Link Aggregation Group (LAG).

lag-multi: Specifies the port that belongs to Multi Traffic Aggregation (MTA).

P3 = < interface ID >

Specifies the interface ID. Multiple entries are available.

Requirement/Note

Between the interfaces that belong to the Port Isolate Groups, the frame transfer is suspended.

The port that is already belongs to other Isolation Group cannot be selected.

Entry Example

```
No.001@1(config)# isolate 1 eth 0/1
No.001@1(config)# isolate 32 modem 1/1
No.001@1(config)# isolate 16 lag-eth 2
No.001@1(config)# isolate 8 lag-multi 1
```

```
No.001@1(config)# isolate 1 eth 0/1, 0/2
No.001@1(config)# isolate 4 lag-eth 1,2,3
```

Relative Commands

no isolate
show isolate config

no isolate

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the settings of Port-Isolate assigned interface that belongs to the Port Isolate Groups,

Format

`no isolate` [P1 [P2 P3]]

Parameters

P1 = `1` *to* `32`

Select (an) Isolate Group Number(s) to restore its/their settings to default values. Multiple entries are available.

When omitted, all the Port Isolate Groups are removed.

P2 = {`eth` | `modem` | `lag-eth` | `lag-multi`}

eth: Specifies an Ethernet Port.

modem: Specifies a MODEM Port.

lag-eth: Specifies the port that belongs to Link Aggregation Group (LAG).

lag-multi: Specifies the port that belongs to Multi Traffic Aggregation (MTA).

When P1 selects multiple Priority Numbers, this parameter is voided.

P3 = < interface ID >

Specifies the interface ID of the target. Multiple entries are available.

Requirement/Note

None.

Entry Example

```
No.001@1(config)# no isolate 32 eth 0/1
No.001@1(config)# no isolate 16 modem 1/1
No.001@1(config)# no isolate 24 lag-eth 1
No.001@1(config)# no isolate 8 lag-multi 1
No.001@1(config)# no isolate 32 eth 0/1, 0/2
No.001@1(config)# no isolate 4 lag-eth 0-3
No.001@1(config)# no isolate 1,3,5
No.001@1(config)# no isolate
```

Relative Commands

isolate
show isolate config

show isolate config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Port Isolate settings,

Format	`show isolate config` [P1]
Parameters	P1 = `1` *to* `32` Select (an) Isolate Group Number(s) to retrieve its/their settings. When omitted, all the Isolate Groups are selected.
Requirement/Note	None.
Entry Example	No.001@1# `show isolate config`
Relative Commands	**isolate** **no isolate**

4.3.1.7 Broadcast Storm Control Setting

broadcast storm-control rate

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command specifies the rate settings for Broadcast Storm Control.

Format

```
broadcast storm-control rate P1
```

Parameters

P1 = `1` *to* `1000`

Enter the rate value for Broadcast Storm Control rate. (unit = M bit/s).

Default Value: `1000`

Requirement/Note

None.

Entry Example

```
No.001@1(config)# broadcast storm-control rate 1000
```

Relative Commands

no broadcast storm-control rate
broadcast storm-control
no broadcast storm-control
show broadcast storm-control config

no broadcast storm-control rate

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Configuration Mode

This command removes the rate settings for Broadcast Storm Control.

Format	`no broadcast storm-control rate`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config)# `no broadcast storm-control rate`
Relative Commands	**broadcast storm-control rate** **broadcast storm-control** **no broadcast storm-control** **show broadcast storm-control config**

broadcast storm-control

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command enables/disables the Broadcast Storm Control.

Format

```
broadcast storm-control P1
```

Parameters

P1 = {**enable** | **disable**}

enable: Enables the Broadcast Storm Control settings.

disable: Disables the Broadcast Storm Control settings.

Default Value: `disable`

Requirement/Note

Broadcast Storm Control and Policer cannot be assigned to the same port.

Entry Example

```
No.001@1(config-if)# broadcast storm-control enable
No.001@1(config-if)# broadcast storm-control disable
```

Relative Commands

broadcast storm-control rate
no broadcast storm-control rate
no broadcast storm-control
show broadcast storm-control config
qos policer entry
no qos policer entry

no broadcast storm-control

Accessible: ☑ Admin / ☑ Config / ☐ Operator / ☑ Remote

Command Mode: Interface Mode

This command removes the Broadcast Storm Control settings.

Format	`no broadcast storm-control`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1(config-if)# `no broadcast storm-control`
Relative Commands	**broadcast storm-control rate** **no broadcast storm-control rate** **broadcast storm-control** **show broadcast storm-control config** **qos policer entry** **no qos policer entry**

show broadcast storm-control config

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of Broadcast Storm Control settings.

Format	`show broadcast storm-control config`
Parameters	None.
Requirement/Note	None.
Entry Example	No.001@1# `show broadcast storm-control config`
Relative Commands	**broadcast storm-control rate** **no broadcast storm-control rate** **broadcast storm-control** **no broadcast storm-control**

4.4 Inventory

4.4.1 Equipment Inventory Information

4.4.1.1 Equipment Revision

show equipment revision

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of equipment revision.

Format	`show equipment revision`
Parameters	None
Requirement/Note	None.
Entry Example	No.001@1# `show equipment revision`
Relative Commands	None.

4.4.1.2 Hardware Inventory

show equipment inventory

Accessible: ☑ Admin / ☑ Config / ☑ Operator / ☑ Remote

Command Mode: User Mode, Privileged Mode

This command retrieves the information of equipment and installed hardware.

Format	`show equipment inventory` P1
Parameters	P1 = {`idu` | `odu`} **idu**: Enter `idu` to show the information of BB. **odu**: Enter `odu` to show the information of RF.
Requirement/Note	None.
Entry Example	No.001@1# `show equipment inventory idu` No.001@1# `show equipment inventory odu`
Relative Commands	None.