

# Power Over Ethernet Commands

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# Chapter 1 Power Over Ethernet Configuration Commands

## 1.1 POE Configuration Commands

### 1.1.1 show poe system

It is used to display the information about POE-related systems.

```
show poe system
```

#### Parameter

N/A

#### Default value

N/A

#### Command mode

Monitoring mode

#### Explanation

POE DRIVER: means the drive of the chip.

POE CHIP: means the detailed chip type.

POE Port Num: means the maximum POE ports.

PSE PowerManagement: means the power source management mode (automatic, preempt, non-preempt).

PSE Total Power: Total power of the power source equipment

PSE Usage Threshold: power alarm (it is set according to the percentage)

PSE Alarm Power: means the power alarm threshold.

PSE Lower-Port-Disable Power: The threshold of the power supply for the relatively high priority preempt, which is effective only in non-automatic mode

PSE Lower-Port-NoConnect Power: The threshold of the power supply to forbid the lower or same-level priority preempt, which is effective only in non-automatic mode

PSE Consumed Power: the used power consumption

PSE Peak Power: peak power of the power source equipment, which is effective when the power statistics is enabled

PSE Mib Notification: MIB notification occurs when the power supply for a port changes or the power changes.

PSE Temperature PSE: temperature of the chip

#### Example

```
Switch#show poe system
```

POE DRIVER:PETH PD69012 DRV  
POE CHIP:PD69012  
POE Port Num:24  
PSE PowerManagement:Preemptive  
PSE Total Power:80000 mW  
PSE Usage Threshold:80%  
PSE Alarm Power:64000 mW  
PSE Lower-Port-Disable Power:62000 mW  
PSE Lower-Port-NoConnect Power:44000 mW  
PSE Consumed Power:47500 mW  
PSE Peak Power:101300 mW  
PSE Mib Notification:Disable  
PSE Temperature:38 degree

#### Related command

N/A

### 1.1.2 show poe all

Displays the information description table of the POE port.

show poe all

#### Parameter

N/A

#### Default value

N/A

#### Command mode

Monitoring mode

#### Explanation

Port enabled/disabled: To enable or disable power supply for a port

Port Detection Statu: means the power supply state of a port, which may be disabled, searching-power or fault.

delivering-power: means the power supply is normal.

Port pairs: the ordering of the power line of a port, of which **signal** means the power supply by way of the signal line and **spare** that by way of the spare line

Port priority: means the priority for port's power supply and it from high to low is critical, high and low.

## Example

```
Switch#show poe all
```

Port	Enable	Status	Pair	Priority
f0/3	enabled	disabled	signal	low
f0/4	enabled	disabled	signal	low
f0/2	enabled	disabled	signal	low
f0/1	enabled	disabled	signal	low
f0/5	enabled	disabled	signal	low
f0/6	enabled	disabled	signal	low
f0/7	enabled	disabled	signal	low
f0/8	enabled	disabled	signal	low
f0/9	enabled	searching	signal	high
f0/10	enabled	searching	signal	high
f0/11	enabled	searching	signal	high
f0/12	enabled	searching	signal	high
f0/13	enabled	delivering-power	signal	high
f0/14	enabled	searching	signal	high
f0/15	enabled	delivering-power	signal	high
f0/16	enabled	searching	signal	high
f0/17	enabled	disabled	signal	low
f0/18	enabled	disabled	signal	low
f0/19	enabled	disabled	signal	low
f0/20	enabled	disabled	signal	low
f0/21	enabled	disabled	signal	low
f0/22	enabled	delivering-power	signal	low
f0/23	enabled	delivering-power	signal	low
f0/24	enabled	delivering-power	signal	critical

## Related command

N/A

## 1.1.3 show poe power

It is used to display the information about the power supply of all ports.

```
show poe power
```

## Parameter

N/A

**Default value**

N/A

**Command mode**

Monitoring mode

**Explanation**

Max: means the maximum power limitation of a port.

Current: means the current power of a port.

Average: means the average power of a port, which is effective only when the power statistics table is enabled.

Peak: means the peak power of a port, which is effective when the power statistics is enabled.

Bottom: means the bottom power of a port, which is effective only when the power statistics table is enabled.

**Example**

Switch#show poe power

Port	Current	Max	Average	Peak	Bottom
f0/3	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/4	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/2	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/1	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/5	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/6	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/7	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/8	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/9	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/10	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/11	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/12	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/13	7600 mW	30000 mW	7620 mW	7800 mW	7600 mW
f0/14	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/15	7600 mW	30000 mW	7600 mW	7800 mW	7600 mW
f0/16	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/17	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/18	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/19	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/20	0 mW	30000 mW	0 mW	0 mW	0 mW

f0/21	0 mW	30000 mW	0 mW	0 mW	0 mW
f0/22	15900 mW	30000 mW	15890 mW	16200 mW	14900 mW
f0/23	7700 mW	30000 mW	7780 mW	7800 mW	7700 mW
f0/24	8400 mW	30000 mW	9850 mW	22500 mW	6500 mW

## Related command

N/A

## 1.1.4 show poe interface

It is used to display the detailed POE information of a designated port.

show poe interface *type slot/port*

## Parameter

Parameter	Description
type	Interface type
slot	Slot ID
Port	Port ID

## Default value

N/A

## Command mode

Monitoring mode

## Explanation

PSE Port Number: means the ID of an internal port.

Port Power Enabled: means to enable the power supply for a port.

Port Force Power: means to enable the forced power supply or the power supply for a low-priority port.

Port detection: the power supply state of a port, which may be disabled, searching-power or fault

Port Fault Status: means the error information about a port.

Port Last Disconnection Reason: means the reason of the latest power cutoff on a port.

Port pairs: means the ordering of the power line of a port, of which **signal** means the power supply by way of the signal line and **spare** that by way of the spare line.

Port IEEE Class: means the class of a port.

Port priority: means the priority for port's power supply and it from high to low is critical, high and low.

Port Current : stands for the present current on a interface.

Port Voltage: means the current voltage of a port, which cannot be shown by some chips.

Port Current Power: stands for the current power on an interface.

Port Average Power: means the average power of a port, which is effective only when the power statistics table is enabled.

Port Peak Power : means the peak power of a port, which is effective when the power statistics is enabled.

Port Bottom Power: means the bottom power of a port, which is effective only when the power statistics table is enabled.

Port Max Powe: means the maximum power limitation of a port.

Port PD Discription: stands for the description of a port.

### Example

```
Switch#show poe interface f0/24
PSE Port Number : 23
Port Power Enabled : enable
Port Force Power : disable
Port Detection Status : delivering-power
Port Fault Status :
Port Last Disconnection Reason : Port was disabled
Port Pairs : signal
Port IEEE Class : 0
Port Priority : critical
Port Current : 163 mA
Port Current Power : 8400 mW
Port Average Power : 8440 mW
Port Peak Power : 22500 mW
Port Bottom Power : 6500 mW
Port Max Power : 30000 mW
Port PD Discription : AP
```

### Related command

N/A

## 1.1.5 poe power-management

It is used to set the power supply management mode for a switch.

```
poe power-management {auto | preemptive | non-preemptive | lowDisable |
lowNoConnect } value
```

### Parameter

Parameter	Description
auto	Sets the power-supply management mode of a switch to <b>automatic</b> .
preemptive	Sets the power-supply management mode of a switch to <b>preemptive</b> .
non-preemptive	Sets the power-supply management mode of a switch to <b>non-preemptive</b> .
lowDisable	When the total power exceeds <b>lowDisable</b> , the port cannot be powered; when the total power is less than <b>lowDisable</b> , the power supply can go again. $\text{lowDisable} = \text{total power} - \text{value}$
lowNoConnect	When the total power exceeds <b>lowNoConnect</b> , those ports whose priorities are lower than or equal to the priority of the currently powered port, which is lowest priority among the powered ports, will be cut off from the power supply. $\text{lowNoConnect} = \text{lowDisable} - \text{value}$

### Default value

The power supply management mode is **auto** by default.

### Command mode

Global configuration mode

### Explanation

**Auto:** The maximum power limitation of a port cannot be set and the port's power supported by the chip is considered by default as the maximum power.

The power-supply priority of a port cannot be set and the default priority of this port is **low**.

**Preemptive:** It is to enable the function of limiting the maximum power of a port.

It is also to enable the power supply priority of a port.

Non-preemptive: it is to enable the function of limiting the maximum power of a port.

It is also to enable the power supply priority of a port.

Preempt means that a new PD device will be normally powered by a high-priority power supply port if the new PD device is connected to this high-priority port in full load and at the same time the port with the lowest power-supply priority will be cut off from power supply.

Non-preempt means that the power supply port with high priority will be notified that a PD device has accessed when this port is connected to a PD device in full load.

### Example

The following example shows how to set the power supply management mode to **preemptive**.

```
Switch_config#poe power-management preemptive
Switch_config#poe power-management lowDisable 18000
Switch_config#poe power-management lowNoConnect 18000
```

### Related command

```
poe max-power
poe priority
```

### 1.1.6 poe led-time

It is used to set the lasting time of the LED in PoE mode.

```
poe led-time time
no poe led-time
```

### Parameter

Parameter	Description
time	Unit: second

### Default value

The lasting time of LED in POE mode is 30 seconds.

### Command mode

Global configuration mode

### Explanation

The **no poe led-time** command can set the lasting time back to the default value.

### Example

The following example shows how to set the lasting time to 10 seconds.

```
Switch_config#poe led-time 10
```

### Related command

N/A

## 1.1.7 poe mib notification-stop

To stop sending the trap notification to users when power supply changes or power alarm occurs, run the following command:

```
poe mib notification-stop
```

```
no poe mib notification-stop
```

### Parameter

N/A

### Default value

In the default settings, the change of power supply or the occurrence of power alarm will lead the system to send the trap notification to users.

### Command mode

Global configuration mode

### Explanation

The “no” form of this command can be used to resume the default settings.

### Example

The following example shows how to stop sending the trap notification to users when power supply changes or power alarm occurs:

```
Switch_config#poe mib notification-stop
```

### Related command

N/A

## 1.1.8 poe pse-unprotect

To set power supply protection for a port, run the following command:

```
poe pse-unprotect
```

```
no poe pse-unprotect
```

**Parameter**

N/A

**Default value**

The power supply protection for ports is enabled by default.

**Command mode**

Global configuration mode

**Explanation**

The “no” form of this command can be used to resume the default settings.

**Example**

The following example shows how to disable the power supply protection:

Switch\_config# poe pse-unprotect

**Related command**

N/A

**1.1.9 poe counter value**

To enable the power statistics globally, run the following command:

poe counter *value*

no poe counter

**Parameter**

Parameter	Description
<i>value</i>	Stands for the sampling interval, whose unit is second.

**Default value**

The power statistics is disabled by default.

**Command mode**

Global configuration mode

**Explanation**

The “no” form of this command can be used to resume the default settings.

### Example

The following example shows how to set the sampling interval of the power statistics to 5 seconds.

```
Switch_config# poe counter 5
```

### Related command

N/A

### 1.1.10 poe threshold

Sets the percentage between alarm power and the total power.

```
poe threshold value
```

```
no poe threshold
```

### Parameter

Parameter	Description
value	Sets the percentage between alarm power and the total power.

### Default value

The default percentage between alarm power and the total power is 100%.

### Command mode

Global configuration mode

### Explanation

The “no” form of this command can be used to resume the default settings.

### Example

The following example shows how to set the percentage between the alarm power and the total power to 50%:

```
Switch_config#poe threshold 50
```

### Related command

poe power-management

### 1.1.11 poe standard

To set the standard of PSE power supply, run the following command:

poe threshold {AF| AT| MAX}

#### Parameter

Parameter	Description
AF	If you select the AF standard, the power supply for a port can reach up to 15.4W.
AT	If you select the AT standard, the power supply for a port can reach up to 30W.
MAX	If you select MAX, it means that as to the switch with support of both AF and AT, the AT standard will be selected, and as to the switch only supporting AF, the AF standard will be selected.

#### Default value

The switch support MAX by default.

#### Command mode

Global configuration mode

#### Explanation

If you select the AF standard, the power supply for a port can reach up to 15.4W.

If you select the AT standard, the power supply for a port can reach up to 30W.

If you select MAX, it means that as to the switch with support of both AF and AT, the AT standard will be selected, and as to the switch only supporting AF, the AF standard will be selected.

#### Example

The following example shows how to set the PSE power supply standard to AF.

```
Switch_config#poe standard AF
```

#### Related command

N/A

### 1.1.12 poe disable

Enabling the Power Supply of a Port

```

poe disable { time-range name | <cr>}
no poe disable {time-range | <cr>}

```

#### Parameter

Parameter	Description
time-range <i>name</i>	The parameter <b>name</b> stands for the name of the power-off time range.
<cr>	Means to enter <b>poe disable</b> alone and shut down the port.

#### Default value

Power supply on a port is enabled and there is no time limit to power supply.

#### Command mode

Interface configuration mode

#### Explanation

poe disable: means to shut down power supply.  
no poe disable: means to open power supply.

#### Example

The following example shows how to disable the power supply of port f0/1.  
Switch\_config\_f0/1#poe disable

#### Related command

time-range

#### 1.1.13 poe max-power

It is used to set the maximum power of a port.

```

poe max-power value
no poe max-power

```

#### Parameter

Parameter	Description
value	Means the maximum power of a

	port, whose unit is mW.
--	-------------------------

**Default value**

The default maximum power of a port is 30000mW.

**Command mode**

Interface configuration mode

**Explanation**

The "no" form of this command can be used to resume the default maximum power.

**Example**

The following example shows how to set the maximum power of port f0/1 to 15000mW.  
Switch\_config\_f0/1#poe max-power 15000

**Related command**

poe power-management

**1.1.14 poe priority**

Setting the Power Supply Priority for a Port  
poe priority {critical | high | low }

**Parameter**

Parameter	Description
critical	Stands for the highest priority.
high	Stands for the high priority.
low	Stands for the lowest priority.

**Default value**

The power supply priority of a port is **low** by default.

**Command mode**

Interface configuration mode

## Explanation

N/A

## Example

The following example shows how to set the power supply priority of port f0/1 to **critical**.

```
Switch_config_f0/1#poe priority critical
```

## Related command

```
poe power-management
```

## 1.1.15 poe PD-discription

It is used to set the port description (usually for PD).

```
poe PD-discription string
```

```
no poe PD-discription
```

## Parameter

Parameter	Description
string	Stands for the character string of port's description.

## Default value

The default value is null.

## Command mode

Interface configuration mode

## Explanation

The "no" form of this command is used to delete the description character string.

## Example

The following example shows how to set POE description to **AP-1**.

```
Switch_config_f0/1#poe PD-discription AP-1
```

## Related command

N/A

### 1.1.16 poe force-power

It is used to set the forced power supply.

poe force-power

no poe force-power

#### Parameter

N/A

#### Default value

The forced power supply is disabled by default.

#### Command mode

Interface configuration mode

#### Explanation

The “no” form of this command is used to disable the forced power supply.

#### Example

The following example shows how to set the forced power supply for the POE port.

```
Switch_config_f0/1#poe force-power
```

#### Related command

poe power-management