

Optical-Module Parameter Inquiry and Alarm Configuration

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Chapter 1 Optical-Module Parameter Inquiry and Alarm Configuration

1.1 Introduction of Optical Module's Parameters

The parameters of optical module include the light transmission power, the light reception power, the temperature, the power-supply voltage and the bias current. The five parameters have basically decided whether the optical module can work normally. If one of the five parameters is abnormal, ONU registration will be abnormal or packet loss will occur on the link.

1.2 Browsing the Parameters of Optical Module

1.2.1 Browsing the Parameters of Optical Modules on All PON Ports

The command which is used to browse all optical-module parameters is shown below:

Command	Purpose
show gpon optical-transceiver-diagnosis	Browses all parameters of optical module including the transmitting optical power, the reception optical power, the temperature, the power-supply voltage and the bias current.

1.2.2 Browsing the Parameters of Optical Modules on a PON Port

The command which is used to browse all optical-module parameters of a PON port is shown below:

Note: The transmitting optical power, temperature, power supply voltage and bias current are all for the PON port. The transmitting optical power is for an ONU, that is, it is for an ONU port, so it needs to be displayed separately. Here the to-be-queried port is the PON port, so the reception optical power is excluded.

Command	Purpose
show gpon optical-transceiver-diagnosis interface gpon slot/port	Browses all parameters of optical module including the transmitting optical power, the reception optical power, the temperature, the power supply voltage and the bias current.

1.2.3 Browsing the reception optical power for an ONU on a PON port

Browsing the reception optical power for an ONU on a PON port is shown below:

Command	Purpose
show gpon optical-transceiver-diagnosis interface <i>gpon slot/port:sequence</i>	Browsing the reception optical power for an ONU on a designated PON port

1.3 Optical Module Parameter Alarm Setting

1.3.1 Optical Module Parameter Alarm Configuration Commands

Optical module parameter alarm configuration commands are shown below:

Command	Purpose
enable	Enters EXEC mode
config	Enters the configuration mode
ddm enable	Enables global optical module parameter monitoring function
interface <i>gpon slot/port</i>	Enters PON port or PSG port
gpon optical-transceiver { power-tx power-rx temperature voltage current } { high-limit low-limit } { enable threshold <i>alarm-value</i> <i>clear-value</i> disable }	Sets the transmitting optical power, receiving optical power, temperature, power supply, alarm for bias current and alarm clear upper threshold and lower threshold. <i>alarm-value</i> : alarm threshold. <i>clear-value</i> : clear threshold.
exit	Exits the port mode.
exit	Exits the configuration mode.
exit	Exits the EXEC mode.

1.4 Configuration Example

1.4.1 Example of Browsing the Optical Module Parameters

The following example shows how to browse all the optical-module parameters on all PON ports:

Switch_config# **show gpon optical-transceiver-diagnosis**

```

interface          Temperature(degree)      Voltage(V)          Current(mA)
TxPower(dBm)
-----
gpon0/1           35.6                    3.3                11.3            3.5

```

The following command is to check the optical parameter of GP8/1:1 onu.

```
Switch_config# show gpon interface gpon 0/1:1 onu optical-transceiver-diagnos
```

interface	RxPower(dBm)	TxPower(dBm)
gpon0/1:1	-24.6	2.1

1.4.2 The following example shows how to browse the parameters of the OLT optical module.

The following command shows how to enable the transmitting optical power alarm on port e8/1, set the maximum and minimum values, and clear the alarm thresholds.

```
interface gpon0/1
  gpon bind-onu mac fcfa.f79d.00ea 1
  gpon bind-onu mac fcfa.f79d.00e6 2
  gpon bind-onu mac fcfa.f79a.3026 3
  gpon optical-transceiver power-tx high-limit enable threshold 70 30
  gpon optical-transceiver power-tx low-limit enable threshold 20 20
```

The following command shows how to enable the temperature alarm on PON port, set the maximum and minimum values, and clear the alarm thresholds.

```
interface gpon0/1
  gpon bind-onu mac fcfa.f79d.00ea 1
  gpon bind-onu mac fcfa.f79d.00e6 2
  gpon bind-onu mac fcfa.f79a.3026 3
  gpon optical-transceiver temperature high-limit enable threshold 500 400
  gpon optical-transceiver temperature low-limit enable threshold -1280 -400
```

The following command shows how to enable the voltage alarm on PON port, set the maximum and minimum values, and clear the alarm thresholds.

```
interface gpon0/1
  gpon bind-onu mac fcfa.f79d.00ea 1
  gpon bind-onu mac fcfa.f79d.00e6 2
  gpon bind-onu mac fcfa.f79a.3026 3
  gpon optical-transceiver voltage high-limit enable threshold 30 25
  gpon optical-transceiver voltage low-limit enable threshold 0 10
```

The following command shows how to enable the current alarm on PON port, set the maximum and minimum values, and clear the alarm thresholds.

```
interface gpon0/1

  gpon bind-onu mac fcfa.f79d.00ea 1

  gpon bind-onu mac fcfa.f79d.00e6 2

  gpon bind-onu mac fcfa.f79a.3026 3

  gpon optical-transceiver current high-limit enable threshold 1310 800

  gpon optical-transceiver current low-limit enable threshold 0 60
```