

Huawei switch optical attenuation value 23



Article Overview

An optical attenuation value of 23 on a Huawei switch represents the calculated attenuation in dB applied to an optical signal to ensure proper input power at the receiving board.

Understanding Optical Attenuation on Huawei Switches

Huawei switches with optical modules often use built-in variable optical attenuators (VOAs) to adjust the optical power of signals. The OPA (Optical Power Adjustment) function automatically calculates the required attenuation to ensure that the input optical power of the receiving board meets commissioning requirements. The attenuation value is calculated using the formula: $\text{Attenuation} = P_{\text{out}} - P_{\text{in}} - W_{\text{add}} - W_{\text{drop}}$ Where:

- P_{out} is the rated output optical power of the transmitting OA board
 - P_{in} is the rated input optical power of the receiving OA board
 - W_{add} is the insertion loss of the wavelength-adding port
 - W_{drop} is the insertion loss of the wavelength-dropping port
- The resulting attenuation is then evenly distributed across the adjustment points in the optical path. Therefore, a value of 23 dB indicates the total optical power reduction applied to the signal to compensate for link losses and maintain optimal signal levels.

Viewing and Monitoring Optical Attenuation...

Article Content

Jun 01, 2026

Displaying Optical Module Information

The system may fail to obtain information about non-Huawei-certified switch optical modules or obtain incorrect information. You are

Aug 04, 2025

Typical Troubleshooting Cases of Optical Module

Possible causes include: The connector attenuation of the optical fiber exceeds the attenuation threshold, or the optical fiber is bent

Nov 24, 2025

Huawei Switch Optical Attenuation Information

A switch must use optical or copper modules that have been certified for use on Huawei S switches. Non-certified optical or copper

Sep 10, 2025

Introduction of Optical Attenuator on Huawei OptiX OSN 1800

Note: an optical attenuator is optional. That is, it must be purchased separately, if it is required. Classification Fixed Optical

Oct 24, 2025

How To View Optical Transceiver Information On Huawei Switches

Optical transceivers are widely applied in switches, network cards, routers and other communication devices.

Dec 22, 2025

Introduction to Optical Fibers, dB, Attenuation and Measurements

This document is a quick reference to some of the formulas and important information related to optical technologies.

Aug 24, 2025

Checking TX / RX optical power for Huawei Switches and Routers

Here is an example on how to query or display optical power of an interface in a Huawei Router. This is tested using NetEngine40E

Feb 24, 2026

Troubleshooting for Optical Modules on Huawei Switch

Check whether the optical module is Huawei-certified. If it is not certified by Huawei, replace it with a Huawei certified one. Remove

Jan 27, 2026

Optical Interface Interconnection Is Abnormal on CE Switches ...

Depending on the transmit optical power and overload optical power, optical modules are classified into short

Nov 22, 2025

Optical Module Solutions for Huawei S5700/S5720 Series Switches

When using switches, we may encounter many confusions, such as what types of optical modules are needed for

Jun 30, 2026

Introduction of Optical Modules on Huawei Switches

Introduction of Optical Modules on Huawei Switches On an optical network, a sender needs to convert electrical signals into optical

Nov 15, 2025

Optical Transmission Basics 01

Optical Performance Optical Communication Technologies Optical Components Optical Power Management Ultra-High Speed

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Optical Transmission Basics 01

The attenuation value calculated by the software should be equal to the total optical power attenuation margin minus the port

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OPTICAL MODULES FOR HUAWEI S SERIES SWITCHES

To determine whether optical modules delivered for Huawei switches before July 1, 2013 are certified ones, contact Huawei technical

Feb 03, 2026

Displaying Optical Module Information

A switch must use optical or copper modules that have been certified for use on Huawei S switches. Non-certified optical or copper

Nov 26, 2025

FAQ-How Do I View the Transmit and Receive Optical Power of an Optical ...

Modular Switch V200R002& V200R003 The Current Rx Power (dBm) field in the command output indicates the

Apr 25, 2026

How to Troubleshoot transceiver issue in Huawei switch/router/devices

Receiving power too high (Current RX Power > Default RX Power High Threshold):
May caused by using long

Sep 17, 2025

Displaying Optical Module Information

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Feb 09, 2026

OPTICAL MODULES FOR HUAWEI S SERIES SWITCHES

A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper

Oct 03, 2025

What Is an Optical Module and Its FAQs (V200)

Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key performance counters,

Jul 21, 2026

Huawei S Series Campus Switches Troubleshooting Guide (V100 and

Why Cannot Connected Optical Ports Go Up After Single-Fiber Bidirectional Optical Modules Are Used? How Do I Ensure that the

Dec 23, 2025

Checking the optical attenuation of Huawei switches

Troubleshooting for Optical Modules on Huawei Switch If the transmit power remains low, replace the optical module or install it in

Aug 30, 2025

How Do I Check the Transmit and Receive Optical Power of an Optical ...

This page provides a guide on checking the transmit and receive optical power of an optical module for Huawei devices.

Mar 09, 2026

Huawei Switches Viewing Optical Port Receiving and Sending

Use the command display transceiver to view the optical module information of all optical ports, and use the command

Aug 21, 2025

Checking the Working Modes

Replace the optical module or fiber. Check whether the optical module and fiber meet requirements. Use an optical

Aug 16, 2025

Using the OTDR to Locate Abnormal Attenuation Points on the Optical

The optical time domain reflectometer (OTDR) is usually used for locating abnormal attenuation points on the optical line.

Contact Us

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