

How are optical ports represented on Huawei switches

Article Overview

Huawei switch optical ports support SFP/SFP+ modules with certified compatibility, allowing monitoring of link status, optical power, and diagnostic parameters through CLI commands.

Overview of Huawei Optical Ports

Huawei switches use optical ports to connect fiber optic cables via SFP (Small Form-factor Pluggable) or SFP+ modules, supporting both single-mode and multi-mode fibers. These ports are designed for high-speed data transmission and can operate at speeds ranging from 100 Mbps to 100 Gbps depending on the switch model and module type . Each optical port can provide digital diagnostic monitoring (DDM), which allows real-time monitoring of parameters such as transmit/receive power, voltage, bias current, and temperature .

Module Compatibility and Certification

Huawei requires the use of certified optical modules to ensure transmission reliability and service stability. Non-certified modules may cause link instability or service interruptions, and Huawei does not provide support for issues caused by non-certified modules . Certified modules are labeled with "HUAWEI" and meet specific firmware and manufacturing date requirements. For example, modules manufactured after July 1, 2013, with firmware version V200R001C00 or later, are considered certified .

Monitoring and Diagnostics

To check the status and performance of optical ports, Huawei switches provide several CLI commands:

- o display transceiver: Shows information for all optical ports, including module type, connector type, wavelength, transfer distance, and vendor name .
- o display transceiver interface : Displays detailed information for a specific optical port .
- o display transceiver : Provides receive and transmit power, temperature, voltage, and bias current for the module .
- o display transceiver diagnosis interface : Retrieves DDM diagnostic parameters for troubleshooting . Additionally, the display interface command can be used to check link status, interface rate, and traffic statistics, which is essential for troubleshooting connectivity issues .

Best Practices

- o Always use Huawei-certified optical modules to ensure stable operation and avoid warranty issues .
- o Regularly monitor DDM parameters to detect potential issues such as low optical power or high temperature

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- o Verify module type, wavelength, and distance compatibility with the switch and network design to prevent link degradation .
- o Use the display interface brief command to quickly identify active interfaces and their status before performing detailed diagnostics . Huawei optical ports provide robust monitoring and diagnostic capabilities, making them reliable for enterprise and data center networks when used with certified modules and proper management practices.

What Is the Impact of Using Non-Huawei-Certified Switch Optical Modules? When certifying an optical module, Huawei

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

Optical modules are encapsulated in different modes to provide different structures. Huawei S series devices support optical modules

This article summarizes several solutions for using optical modules with switches and common problems encountered

EXECUTIVE SUMMARY This document provides a comprehensive technical overview of the Huawei Optical Module Part Number

S6700 Series Switches Hardware Description (V200) About This Document Using the Info-Finder Version Requirements for

The optical module installed on the optical interface is not certified for Huawei data center switches. The optical module type does

When connecting switches through optical ports, pay attention to the following points: The optical modules used on both ends must

If an optical module is installed in a running switch, you can run the display transceiver command to view parameters of the optical

AOC An active optical cable (AOC) is a fixed-length optical fiber with optical modules at both ends. It can be directly connected to an

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Install an optical module, and then connect optical fibers to the optical module. Do not insert an optical module with optical fibers to

Huawei S5700 - Naming Conventions and Port Numbering Conventions Huawei S5700 Switch naming conventions NOTE: The

Using a Command If an optical module is installed in a running device, you can run the display transceiver command

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

Access port config: An access port belongs to and carries the traffic of only one VLAN within 2-layer switch. Traffic is

The following picture is the optical module information queried on the Huawei switch, which is marked with the

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