The switch port s optical port is not receiving optical signals

Overview

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

Key Takeaways

No optical signal on a switch port is often caused by module incompatibility, fiber mismatch, port shutdown, or abnormal optical power levels.

Check Optical Module Compatibility

Ensure the optical module is certified for your switch model. Non-certified modules may not be recognized or may prevent the port from going Up. For Huawei switches, certified modules typically have a Huawei logo on the label; if not, contact technical support or replace the module with a certified one.

On other brands, verify recognition via CLI commands to confirm the module is detected. Verify Fiber Type and ConnectionSingle-mode modules must use single-mode fiber (usually yellow, 1310 nm or 1550 nm). Multimode modules must use multimode fiber (usually orange, 850 nm).

Mismatched fiber types prevent signal transmission. Also, check that fiber connectors are clean and free of dust; contaminated optical bores can reduce transmit power.

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Check Port Status and Configuration

Use commands like display interface GigabitEthernet x/x/x or equivalent to check if the port is Administratively DOWN or shut down. Ensure the port speed matches the module (e.g., do not use a 10G module on a 1G interface) and that auto-negotiation or manual speed settings are correct. For combo or multi-rate ports, manually configure the correct rate if necessary.

Measure Optical Power

Use an optical power meter to check both transmit and receive power. Low or high power can indicate: Faulty laser circuit in the moduleExcessive attenuation in the fiberDirty connectors or optical bores If power is outside the module's specification, clean the connectors or replace the module.

Additional Steps

Perform a loopback test by connecting the fiber jumper to the same module to verify the port can go Up. Remove and reinstall the module, or power cycle/reboot the switch if the fault persists. Check the switch software version and upgrade if necessary, as some versions may have module recognition issues.

If all steps fail, contact the switch or module vendor's technical support for further assistance.

Article Content

Optical Module Application: Common Problems & Troubleshooting

Based on typical issues encountered with optical modules in daily switch applications, this document summarizes basic troubleshooting steps for resolving common faults:

Typical Troubleshooting Cases of Optical Module

Check whether the optical module is a Huawei-certified one. If not, replace it with a Huawei-certified optical module. If the optical module is installed on a GE port, run the display interface

Troubleshoot Fiber Links on Catalyst 9000 Series Switches

This document describes how to troubleshoot fiber optic interfaces by addressing some of the fiber optic module and cabling specifications.

An Optical Module Does Not Send Optical Signals

Remove and reinstall the optical module. If the fault persists, replace the optical module with a normal one of the same type to check whether the optical module is faulty.

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Optical Link Failure Troubleshooting: Switch-to-Switch (SMF/MMF)

Learn how to troubleshoot optical link failures between network switches. Essential guide covers checking optical modules, single-mode (SMF) vs. multimode (MMF) fiber integrity, and

SFP Issue: Causes, Fixes, and Troubleshooting Guide

Learn how to fix SFP issues fast: no link light, link flapping, detection errors, compatibility problems, and optical power checks.

Troubleshoot Switch Port and Interface Problems

This is because the switch does not know that the connected device is a PC; the switch only knows that the port has changed the state. In order to resolve this issue, Cisco has developed

How to Troubleshoot A Fiber Optic Transceiver?

How to troubleshoot a fiber optic transceiver? This article will focus on how to troubleshoot and resolve transmission, information reading, and hardware failures of the optical module.

Common Problems And Solutions When Using Optical Modules

First, check whether the status of the optical port is on, and then check whether the optical module parameters of both ends are matched (such as wavelength, speed, and transmission ...

Troubleshooting SFP Transceiver Issues

Problem: The SFP transceiver is inserted into the switch or router, but the device does not recognize it. Causes & Solutions: Check Compatibility – Not all SFP modules work with every switch or router.

Cisco 10GBASE SFP+ Modules Data Sheet

Hot-swappable input/output device that plugs into an Ethernet SFP+ port of a Cisco switch (no need to power down if installing or replacing) Supports

Telecommunications

Many transmission media have been used for long-distance communication throughout history, from smoke signals, beacons, semaphore telegraphs, signal

Method and system for selectable parallel optical fiber and wavelength ...

Similarly, modulated 1310 nm signals may be received from the fiber array optical interface 201 via the PSGCs 209 C and communicated to the 4-port high-speed photodiodes 207 A-

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NVIDIA/Mellanox MMS4A00-XM-FLT/MMS4C10-XM

This design achieves higher integration, lower power consumption, and greater port density. The transceiver is ideal for 1.6T liquid-cooled switch-to-switch

Troubleshooting and Repairing Optical Transceiver Failures in

SFP or SFP+ optical transceiver failure can happen in multiple recognizable ways.The most notable fault is the “module not detected” error, which describes a situation in which a switch

(PDF) Migration Towards All-Optical Networks: A Case Study of Optical ...

The original goal of the all-optical network was based on keeping the data signals entirely in the optical domain from source to destination to eliminate the so-called electronic bottleneck, and ...

Low receive power on optical interfaces; troubleshooting remotely

I have a switch with all four 10g optical links on a port channel showing -40.0 dBm Optical Receive Power. I believe this means it''s not receiving a signal at all. I don''t have physical access to

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