

Checking optical power at switch ports



AI Overview

You can check optical power on a switch's SFP port using CLI commands to read Tx (transmit) and Rx (receive) power via Digital Optical Monitoring (DOM/DDM). Understanding Optical Power Optical power is measured in dBm and indicates the strength of light signals in fiber links. Two key metrics are: TX Power (Transmit): Light leaving the switch. Weak TX may indicate a failing laser in the SFP module. RX Power (Receive): Light arriving from the remote device. Low RX is a common cause of intermittent link issues, packet loss, or err-disabled ports. Most Cisco SFPs support Digital Optical Monitoring (DOM), also called Digital Diagnostic Monitoring (DDM), which provides real-time readings of Tx/Rx power, temperature, voltage, and laser bias current. Steps to Check Optical Power Access the Switch CLI: SSH or console into the switch using your credentials. Verify the Port and SFP Module: `show interface status` — confirms the port is up and connected. `show inventory` — lists installed SFPs with Product ID, serial number, and version. Read Optical Power Metrics: Use one of the following commands depending on your platform: `show interfaces transceiver detail` `show interface transceiver detail` `show fiber-ports-optical-transceiver` (for Small Business switches). These commands display: Output Power (TX) — transmitted optical power in dBm Input Power (RX) — received optical power in dBm Temperature, Voltage, Laser Bias Current — module health indicators LOS (Loss of Signal) — indicates if the SFP detects a signal loss Interpret the Values: Compare Tx/Rx readings with the SFP datasheet specifications. For example, a Cisco GLC-SX-MMD module typically supports ~550m on 50/125µm fiber. RX readings significantly below the sensitivity threshold (e.g., -40 dBm) may indicate a broken fiber, dirty connector, or dead remote transmitter. If the SFP does not support DOM, the output may show N/A. Troubleshooting Tips: Clean fiber connectors if RX is low. Replace the SFP if TX is weak or module alarms are triggered...

Article Content

How to Check SFP Optical Power Levels on Cisco Switches

Learn how to monitor SFP optical power on Cisco switches, interpret Tx/Rx levels, and troubleshoot fiber link issues. Step-by-step CLI commands, model-specific guidance, and best practices included.

How Do I Query the Optical Power of an Interface?

How Do I Query the Optical Power of an Interface? You can run the display interface [interface-type interface-number | slot slot-id] transceiver verbose command to check the optical

View the Optical Module Status on a Switch through the Command

Once the transceiver and fiber optic cable are plugged in properly in the switch optical module, you should be able to view the current information for the optical connection, which helps you manage

How To View Port Status And Optical Module Information On Extreme

This document uses the Moduletek SFP-10G-LR-BIDI optical module installed on an Extreme X690-48x-2q-4c switch as an example to demonstrate how to view port status and optical

Advantages of AOC Cables in 100G Networks

The optical fiber and transceiver ends are fixed together, so the cable can be plugged directly into compatible 100G ports. In most cases, these are QSFP28 ports used on switches,

How To View Port Status And Optical Module

Reading internal transceiver data helps monitor link status, optical power, temperature and coding compatibility between modules and switches. We

Cisco Router Fiber Optic Levels

Below is a way to check the Tx/Rx Optical power levels on a Cisco router. I have a post on how to check these on Cisco switches. These are the levels you're look for: Tx Power Level: Within 6dB Range

Checking TX / RX optical power for Cisco IOS, IOS-XR, NX-OS

For checking transmission links, it is good to know how to find out the optical power for troubleshooting and making sure the desired or optimal range is meet. Here are the sample commands for checking

Mastering Cisco Optics: Understanding TX/RX Light Levels

In this guide, we will explain what optical signal strength is, how to check it on Cisco IOS using the command line, and how to troubleshoot common

UniFi switch port management & troubleshooting

Port stuck provisioning or a device that won't connect? Guide to UniFi switch port profiles, VLAN assignments, PoE control, and common fixes.

Solved: Fiber optic cable check command

I know that "show cable-diag tdr int [slot/port]" command can check 10/100/1000 ethernet link. For example WS-X6748-GE-TX... etc. But I can find

How to View Optical Module Status on a Cisco Switch

In this Cisco Tech Talk, learn how to view the optical module status on a Cisco switch using the Command Line Interface (CLI). This video

Cisco SFP Commands Cheat Sheet: Check Status

Learn how to check SFP module health on Cisco switches. This guide covers essential CLI commands (show inventory, DOM), fixes for "unsupported

Checking optical attenuation at ports on a Cisco switch

When optical modules operate on a switch, it is usually necessary to read the module's internal information to understand its working status—such as connection status and real-time metrics like

Determining Real-time Optical Power Loss using "show interface ...

Reading through the various topics here, I haven't seen this question directly addressed, so here goes. For the sake of discussion, I have two Cisco switches, Switch1 and Switch2. I run the

How Can I View SFP Module Optical RX/TX Power Strength on Brand Switches?

Optical signal strength is an important element affecting the whole optical links. This post mainly introduces how to check SFP modules signals strength in Cisco and Brocade switches.

Cisco firepower 4115 interface optical level check

Hi Team, I am looking for the Cisco documentation for a command to check interface optical statistics but I do not see any such documents. Basically,

Nvidia unveils photonics switches to scale AI networks

Nvidia is pushing data center networking into the optical era with Spectrum-X Photonics Ethernet and Quantum-X Photonics InfiniBand. By co

View the Optical Module Status on a Switch

View the Optical Module Status of your Switch Step 1. Log in to the web-based utility of your switch then choose Status and Statistics > Diagnostics

How to easily assess Optical Received Power on all Force10 Ports

The following article describes how to quickly and easily assess the optical receive power from any transceiver installed in any Force10 switch (C/E/Z/S-Series, MXL and IOA)

View the Optical Module Status on a Switch through the Command

This article provides instructions on how to view the Optical Module Status on your switch through the Command Line Interface (CLI). The Cisco Small Business Series Switches allow you to plug in a

How To View Port Status And Optical Transceiver

We have shared transceiver query methods for mainstream switches such as Huawei, H3C and Cisco. Fortinet switches use distinctive CLI

Checking optical attenuation at ports on a Cisco switch

In the Privileged EXEC mode of the switch, use the show fiber-ports-optical-transceiver command by entering the following: interface interface-id - (Optional) Specify an Ethernet port ID. Note: In this

How to easily assess Optical Received Power on all

How to quickly and easily assess the optical receive power from any transceiver installed in any Force10 switch

How To Check Port Status And Optical Transceiver Information On

When optical transceivers operate on switches, reading internal module parameters helps monitor link status, real-time transmit/receive optical power, operating temperature and other key

How To View Port Status And Optical Module Information On Cisco

By reading internal parameters of optical transceivers on switches, users can monitor link status, real-time transmit/receive power, operating temperature and other data. It also verifies coding

How To Check Optical Power In Juniper Router?

The information is displayed for Gigabit Ethernet, 10-Gigabit Ethernet, 40-Gigabit Ethernet, 100-Gigabit Ethernet, or Virtual Chassis port

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