

RIVO MULTITRADE OPTICAL SYSTEMS

How to view the wavelength parameters of an optical port module



Overview

How to View Optical Module Parameters If an optical module is installed in a running router, you can run the display interface transceiver command to view.

Key Takeaways

You can check an optical module's wavelength using pull-tab color codes, module labels, or by querying the module's EEPROM via switch CLI commands.1. Visual Identification via Pull-Tab Color

Many optical transceivers use pull-tab colors to indicate their operating wavelength. This method is quick and widely used for SFP, SFP+, CWDM, and BiDi modules. Common examples include:

- 850nm (Multimode): Black
- 1310nm (Multimode): Blue
- 1490nm (Single-Mode): Purple
- 1550nm (Single-Mode): Yellow or Green for extended reach
- CWDM modules: Use 18 distinct wavelengths from 1270nm to 1610nm, each with a unique pull-tab color

- BiDi modules: Transmit and receive on a single fiber using different wavelengths, with color-coded tabs for each direction. While pull-tab colors provide a fast visual cue, always verify with the module label or datasheet, as some manufacturers may have slight variations in color coding.

2. Using Switch CLI Commands

Most managed switches allow you to query transceiver details via CLI, which can display the wavelength along with other parameters:

- Cisco/Arista: `show interfaces transceiver detail` or `show fiber-ports optics`
- HPE Aruba: `sfpShow`
- Netgear: `show fiber-ports optics-EEPROM` These commands provide information such as vendor, serial number, SFP type, speed, and wavelength, and may also include Digital Optical Monitoring (DOM) parameters like TX/RX power, temperature, and voltage.

3. EEPROM Telemetry Verification

For precise verification, especially in high-speed or AI data center environments, the EEPROM of the optical module contains the definitive wavelength value. By reading the EEPROM via I2C or CLI, you can confirm the exact laser source:

- Example values: `0x0352` = 850nm, `0x051E` = 1310nm
- This method ensures correct identification of single-mode vs multimode and avoids issues like modal dispersion or “ghost links” in high-bandwidth deployments.

4. Best Practices

- Combine methods: Use pull-tab color for quick identification, then confirm with module labels or CLI/EEPROM data.
- Check vendor documentation: Minor variations in color coding exist across manufacturers.
- Verify fiber compatibility: Ensure the module wavelength matches the fiber type (single-mode or multimode) and intended transmission distance.
- Use network management tools: Integrate transceiver information into asset management systems for accurate tracking and troubleshooting. By following these methods, you can reliably determine the wavelength of any optical port module and ensure proper network operation.

Article Content

How to View Optical Module Parameters

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

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

Checking Parameter Settings of the Optical Modules

Check the parameter settings such as rate, wavelength, and transmission distance of the interconnected optical modules. Using the

View the Optical Module Status on a Switch through the

Once the transceiver and fiber optic cable are plugged in properly in the switch optical module, you should be able to view the current

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

How to show interface transceiver details on Brand Switches?

Generally, you can use those commands to view specific transceiver vendor names, types, wavelength, distance, Serial

How to View Optical Module Parameters

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

Wavelength parameters of optical port module

Optical module parameters Center wavelength: the unit of center wavelength is nanometer (nm), currently. The optical module is a

Optical Transceiver Manufacturer,How To Check Optical Module ...

Finally, the networking of Cisco switch needs DAC direct attach cable, AOC active optical cable, optical module and

View the Optical Module Status on a Switch

Objective The Cisco Small Business Series Switches allow you to plug in a Small Form-factor Pluggable (SFP) transceiver in their

How to Understand the Performance Parameters of Optical Modules?

The performance parameters of optical modules are important indicators for evaluating their performance. Parameters

What Is an Optical Module and Its FAQs (V200)

What Is an Optical Module and Its FAQs (V200) Describes what an optical module is and FAQs, including the fundamentals,

How To View Optical Transceiver Information On Huawei Switches

1. Transceiver identity information: model, wavelength, transmission distance, SN, manufacturer data stored in

Key Parameters Interpretation of Optical Modules

The transmitted optical power of the optical module is an important parameter that affect the transmission distance of

Displaying Optical Module Information

The Wavelength (nm) field in the command output indicates the wavelength of an optical module. If the two optical modules have

What Are the Key Parameters of Optical Modules

Understand the key parameters of optical modules, including transmission rate, distance, wavelength, and fiber

Things You Need to Know About Optical Modules and Wavelengths

Unlike general optical modules with two ports (Tx and Rx), BiDi optical modules have only one optical port and use

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

Optical signal strength is an important element affecting the whole optical links. This post mainly introduces how to

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