

Checking the optical module on a Huawei switch

Article Overview

Inspecting Huawei switch optical modules involves checking compatibility, monitoring transceiver parameters, verifying link status, and ensuring optical fiber quality.

1. Verify Compatibility and Connection

Before inspection, ensure that the optical module type matches the switch port and the fiber type (single-mode or multi-mode) is compatible with the module. Avoid mixing single-mode and multi-mode fibers or using modules with a higher rate than the interface supports (e.g., a 10G module on a 1G port) to prevent connectivity issues . Perform a loopback test by connecting the fiber jumper to the same module to check for abnormal conditions .

2. Check Port and Transceiver Status

Use Huawei CLI commands to monitor optical module operation:

- o display interface : Shows port rate, transceiver type, link status (UP indicates normal operation), and traffic statistics .
- o display interface brief: Displays a summary of all ports and their status.
- o display transceiver interface verbose: Provides detailed information on wavelength, received and transmitted optical power, and other transceiver parameters .

3. Inspect Optical Fiber Quality

For high-speed modules (e.g., 50G PAM4), optical fiber quality is critical. Check for:

- o Insertion loss and reflection according to standards (GBT50312-2016) to ensure stable links .
- o Clean connectors and splicing surfaces to prevent signal reflection and intermittent disconnections .
- o When using an OTDR meter, disconnect the fiber from the module to avoid damage due to high transmit power .

4. Troubleshooting Common Issues

- o If the optical port indicator is off, check if the port is administratively down using display interface .
- o Verify that the optical power levels are within normal range.
- o Ensure the wavelength matches the connected module and fiber type.
- o For repeated link failures, inspect the fiber for dirt, bends, or poor splicing, which can cause reflection and

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co-channel interference .

5. Additional Tips

- o Regularly monitor DDM (Digital Diagnostic Monitoring) information to track module health and prevent failures .
- o Avoid excessive connector connections, as more connectors increase reflection sensitivity, especially for high-speed PAM4 links .
- o Keep firmware and module compatibility updated according to Huawei documentation . By following these steps, you can effectively inspect, monitor, and troubleshoot optical modules on Huawei switches, ensuring stable and reliable network performance.

Optical modules are electrostatic-sensitive components; therefore, you must take ESD protective measures when replacing optical

Preparing for Installation Unpacking a Switch Installing Switches Installing Modules Connecting Switches Connecting Power Cables

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

Therefore, you can check whether an alarm is generated to determine whether an optical module is officially delivered

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

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

See the interface module via the optical display command information, including general information of the optical module,

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

If your network feels sluggish or devices mysteriously disconnect, the culprit might be smaller than you think--buried inside your

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Today, ETU-LINK will introduce how to query the information of optical module on Huawei switch. Next, we will

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

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

Check whether an optical module that is certified for Huawei data center switches is installed on the optical interface. The CE series

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

Log in to to view the optical module types supported by the switch.

For details about the optical modules supported by optical ports on switches, see "Appearance and Structure" of a specific switch

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