

How to inspect 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.

If there is a Huawei logo on the label, the optical module has been certified for Huawei data center switches. If not,

HUAWEI S Series Switch-Identify a Huawei-Certified Optical Module video demonstrates how to identify a Huawei

Huawei's StarryLink optical modules for data center networks offer seamless interconnection from GE to 800GE across all scenarios,

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

Procedure Check whether the optical modules are Huawei-certified ones. If not, contact the supplier of the optical modules. If

Run the display transceiver diagnosis interface [interface-type interface-number] command to view diagnostic information about a

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

The following uses the Modulatek SFP-10G-LR module connected to a Huawei S6700 switch as an example to introduce how to read

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

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

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

Displaying Optical Module Information You can use the display commands to view information about the optical module on an

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

View the optical module information on Huawei switches and H3C switches through the command

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

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a

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