

Enable optical module on switch

Article Overview

To enable an optical module on a switch, you must safely install the module, ensure it is compatible, and configure the switch to recognize it, including using hidden commands for third-party modules if necessary.

Physical Installation

- o Inspect the module and port: Check for damage or debris on both the optical module and the switch port. Ensure the module is compatible with your switch model and certified if required (especially for Huawei switches) .
- o ESD precautions: Wear an ESD wrist strap or gloves to prevent electrostatic discharge from damaging the module .
- o Insert the module: Align the module's key with the port keyway and slide it straight in until it clicks. Do not force it; if it does not fit, rotate 180° and try again .
- o Secure the module: Engage any latches or screws if present, and remove dust plugs from both the module and fiber connectors. Clean fiber end-faces with approved cleaners before connecting .
- o Connect fiber cables: Insert the fiber connectors into the module, ensuring proper alignment and avoiding direct eye exposure to active fibers .

Switch Configuration

For Cisco Switches

- o By default, Cisco switches may block non-Cisco modules. To enable third-party modules:
 - o Enter global configuration mode: `conf t`
 - o Disable module validation: `service unsupported-transceiver`
 - o Prevent automatic shutdown of unsupported modules: `no errdisable detect cause gbic-invalid`
 - o Save the configuration: `copy running-config startup-config`
- o To revert, use: `no service unsupported-transceiver` and `errdisable detect cause gbic-invalid` .

For Huawei Switches

- o Only certified modules are recommended. Insert the module correctly and verify it is seated by gently pulling on it; if it moves, reinstall .
- o Use CLI commands to check module status: `display transceiver interface [interface-id]` or `display transceiver diagnosis interface [interface-id]` to view operational parameters like optical power, temperature, and voltage .

Verification

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- o After installation and configuration, verify the module is active:
- o Check port LEDs for link status.
- o Use CLI commands to display optical module information, including transmitted and received power, LOS (Loss of Signal), and module type .
- o Troubleshoot by ensuring the fiber is clean, the module is seated correctly, and the switch supports the module type.

Safety and Best Practices

- o Avoid forcing modules into ports to prevent damage.
- o Always use certified or compatible modules to ensure reliability and maintain warranty support.
- o Handle optical fibers carefully to prevent eye injury and maintain signal integrity . By following these steps, the optical module should link up and be recognized by the switch, allowing normal operation.

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This document uses the Moduletek SFP-10G-LR-BIDI optical module installed on an Extreme X690-48x-2q-4c switch

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receiver, and the

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