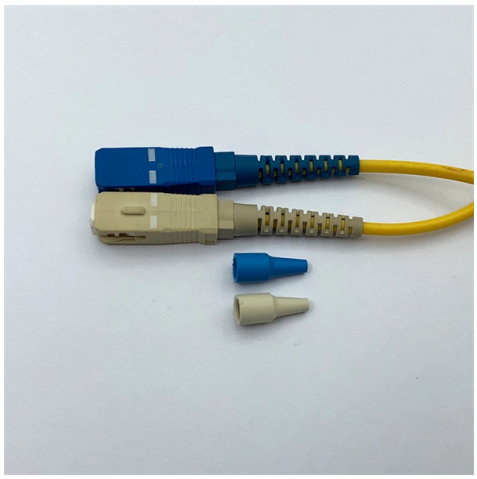
# Function of Optical Modules in Huawei Switches



## Overview

Its main function is to convert between electrical and optical signals during optical signal transmission. Figure 1-1 shows how an optical module works.

## Key Takeaways

Huawei switches use certified optical modules including SFP, SFP+, QSFP+, and QSFP28, supporting speeds from 1G to 100G, with strict compatibility requirements for fiber type and interface speed.

### Types of Optical Modules

Huawei switches support a range of optical transceivers depending on the switch model and port type: SFP (1G): For 100M and 1G connections, suitable for short- and long-distance links using multi-mode (MMF) or single-mode fiber (SMF). SFP+ (10G): Used for 10G uplinks or server connections, compatible with MMF (SR) or SMF (LR/ER/ZR) modules. QSFP+ (40G): For high-speed aggregation or core links, supporting both MMF and SMF.

QSFP28 (100G): For ultra-high-speed uplinks, typically using SMF with LR4 or ER4 modules.

### Certification and Compatibility

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

Huawei requires that only certified optical modules be used to ensure transmission reliability and service stability. Certified modules are labeled with "HUAWEI" and can be verified using commands like display transceiver or display version on the switch. Non-certified modules may cause connectivity issues or damage and are not supported by Huawei.

Fiber Type ConsiderationsMulti-mode fiber (MMF): Short-range connections, typically ≤ 300–400 meters, using SR modules. Single-mode fiber (SMF): Long-distance connections, ≥ 10 km, using LR, ER, or ZR modules. Mixing fiber types: MMF modules should not be used on SMF links and vice versa, as this can cause low optical power or connection failures.

### Installation and Operational Guidelines

Ensure the module matches the port speed; do not use a 10G module on a 1G interface. Perform loopback or diagnostic tests to verify module functionality. Handle modules with ESD protection and carefully insert/remove fibers to avoid damage.

Check optical power levels and wavelengths to ensure proper interconnection.

### Summary

Huawei switches rely on certified optical modules across SFP, SFP+, QSFP+, and QSFP28 families, with strict adherence to fiber type, interface speed, and installation best practices. Using certified modules ensures network stability, optimal performance, and compliance with Huawei support policies.

## Article Content

What Is an Optical Module and Its FAQs (V200)

Its main function is to convert between electrical and optical signals during optical signal transmission. Figure 1-1 shows how an optical module works. The transmit optical bore inputs electrical signals at a

Fundamentals of an Optical Module

Its main function is to convert between electrical and optical signals during optical signal transmission. Figure 21-30 shows how an optical module works. The transmit optical bore inputs electrical signals

Optical Module Solutions for Huawei S5700/S5720 Series Switches

This article summarizes several solutions for using optical modules with switches and common problems encountered during usage, along with specific solutions.

01-10 OPTICAL MODULES

*© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved*

If an optical module is installed in a running device, you can run the display transceiver command to view parameters of the optical module, including the center wavelength, transmission distance, fiber

Introduction of Optical Modules on Huawei Switches

If an optical module is installed in a running switch, you can run the display transceiver command to view parameters of the optical module, including the center wavelength, ...

How To View Optical Transceiver Information On Huawei Switches

Optical transceivers are widely applied in switches, network cards, routers and other communication devices. Checking transceiver parameters allows users to monitor real-time

Huawei Unveils StarryLink Optical Modules That Deliver Ultimate

These modules ensure ultra-long distance transmission, ultra-high reliability, and ultra-robust security, delivering an ultimate network performance with ''3S'' quality."

Huawei CloudEngine S5732-H Series Hybrid Optical-Electrical

Introduction CloudEngine S5732-H hybrid optical-electrical switch is brand-new full-10GE switch developed by Huawei for the Wi-Fi 6 era. The CloudEngine S5732-H builds on Huawei''s unified

Troubleshooting for Optical Modules on Huawei Switch

Multi-mode optical modules are applicable to short-distance transmission, while single-mode optical modules are applicable to long-distance transmission. Single-mode ...

Types of Optical Modules

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a center wavelength of 850 nm, 1310 nm, or 1550 nm, whereas a

What Is StarryLink Optical Module? Why Do We Need It?

The StarryLink optical module is a core component developed by Huawei for data center networks. It delivers ultra-long-distance transmission, exceptional reliability, and enhanced security,

Checking the Optical Module Type

When certifying an optical module, Huawei switches comprehensively verify optical module functions to ensure the optical module quality. The functions include the installation and removal, transmit and

*© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved*

10GE SFP+ Optical Modules

CloudEngine 12800 and 12800E Series Switches Hardware Description This document provides an overall description of the CE12800 series switches hardware, helping you obtain detailed information

Ethernet Switch Port Types Explained 2026: RJ45,

Intro Ethernet switch port types define the performance, scalability, and architecture of modern networks. RJ45 ports serve access-layer copper

400G vs 800G Optical Modules: Differences, Use Cases, and

Compare optical modules for data centers and AI clusters. Learn key differences in standards, power, cabling, and use cases.

Optical Module Working Principle | SFP Transceiver Technical Guide ...

Understanding the working principle of optical modules—especially SFP transceivers—is critical for network engineers, data center operators, and telecom professionals tasked with building

HUAWEI eKitEngine AR580 Series Converged Gateway Datasheet

Huawei eKitEngine AR580 series gateways can be deployed at the egress of the headquarters or branches of small- and medium-sized enterprises (SMEs). The series includes AR580, AR580 Plus,

400G Optical Modules 2026 Guide: DR4 vs. FR4 vs. LR8 Lab

400G FR4 delivers ~40% better fiber utilization in campus backbones LPO-compatible modules reduce power consumption by ~2.5W per port For 2026 deployments, prioritizing LPO

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

*© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved*

## Contact Us

Continue your research online:

Website: https://cgweb.co.za
Technical inquiry: https://cgweb.co.za/project-enquiry.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved