

Article Overview

Huawei optical modules are pluggable transceivers that enable high-speed fiber optic communication for data centers, broadband networks, and enterprise applications.

Overview

Huawei optical modules are essential components in fiber optic communication systems, designed to convert electrical signals into optical signals and vice versa. They are widely used in data centers, telecom networks, and FTTH (Fiber-to-the-Home) deployments. Huawei offers a variety of single modules to meet different interface and transmission requirements, including SFP, SFP+, QSFP, QSFP28, and PON modules .

Common Types of Huawei Optical Modules

- o SFP (Small Form-factor Pluggable): Supports gigabit Ethernet and basic fiber connectivity. Some SFP modules include eSFP variants that monitor voltage, temperature, bias current, and optical power .
- o SFP+: Enhanced SFP for 10 Gbps transmission, compatible with 10 Gigabit Ethernet networks .
- o SFP28: Supports 25 Gbps transmission while maintaining the same interface size as SFP+ .
- o QSFP+: Quad SFP modules for 40 Gbps transmission, typically using MPO fiber connectors .
- o QSFP28: Supports 100 Gbps or 40 Gbps transmission, compatible with QSFP+ interfaces .
- o PON SFP Modules: Carrier-grade modules for GPON, XG-PON, XGS-PON, and 50G-PON networks, supporting downstream rates up to 2.488 Gbps and upstream rates up to 1.244 Gbps, with transmission distances up to 60 km .

Key Specifications

- o Transmission Distance: Varies by module type; long-distance modules may require optical attenuators to prevent receiver overload .
- o Power Consumption: QSFP DD modules typically consume 12-14 watts per module, while smaller SFP modules consume less .
- o Connector Types: LC connectors for SFP/XFP modules, MPO connectors for QSFP modules .
- o Monitoring Features: eSFP modules provide real-time monitoring of voltage, temperature, and optical power .

Applications

- o Data Centers: High-speed interconnects using SFP+, QSFP, and QSFP28 modules for 10G, 40G, and 100G Ethernet.
- o Broadband Access: PON SFP modules for FTTH deployments, supporting scalable GPON and XGS-PON



Huawei Single-Optical Module

networks .

o Enterprise Networks: Flexible plug-and-play modules for switching and transmission equipment, ensuring reliable connectivity . Huawei optical modules are designed for compatibility with Huawei switches, routers, and OLT platforms, providing scalable, high-performance, and future-ready optical connectivity . For purchasing, genuine modules are available through authorized distributors with worldwide shipping .

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models

SFP-10G-LR The Arista Small Form-Factor Pluggable (SFP) optics modules and cables offer customers a wide variety of high

Check whether the optical module and optical fiber match. A single-mode optical module (typically with a center wavelength of 1310

Huawei 1.25G SFP optical module for single-mode fiber, designed to provide stable 1.25Gbps transmission

When certifying an optical module, Huawei comprehensively verifies the functions of the optical module to ensure the optical module

Therefore, optical modules are also classified into single-mode and multimode modules to support different optical fibers. Single

To comply with the digital transformation of enterprises, Huawei's Single OptiX solution helps build all-optical interconnection

10 Gbit/s SFP+ optical modules apply to 10 GE optical ports. The wavelength can be 850 nm, 1310 nm, or 1550 nm, and the

Fundamentals of an Optical Module As an important part of fiber-optic communication, an optical module is a

Quick Specs ... Product Details Huawei SFP-10G-LR provides these features: x/Rx Wavelength: 1310 nm. / 1310 nm. Media Type:

These compact optical transceivers offer a. access and ring network, storage network, and long-haul network.

Huawei SFP-10G-LR is a carrier-grade SFP+ optical transceiver designed for

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Huawei Single-Optical Module

shipping.

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Application Scenarios Industry Optical Communication Network Huawei's Industry Optical Communication Network uses the latest

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

Web: <https://kremgroup.co.za>

