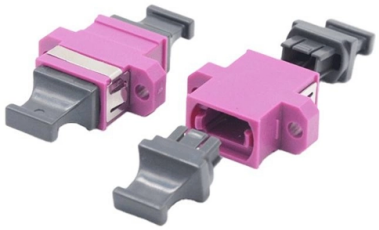
What optical module does Huawei use



Overview

What Is an Optical Module and Its FAQs (V200) Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key perfo.

Key Takeaways

Huawei uses a wide range of optical modules, including SFP, SFP+, SFP28, XFP, QSFP+, QSFP28, CFP, and high-speed 400G/800G modules powered by self-developed photonic chips.

Common Optical Module Types

Huawei offers multiple pluggable optical module form factors for different network needs: SFP (Small Form-factor Pluggable): Standard gigabit modules for short- and long-distance transmission. SFP+: Enhanced SFP supporting 10 Gbit/s transmission. SFP28: Supports 25 Gbit/s, compatible with SFP+ interfaces.

XF

P: 10 Gbit/s modules with LC fiber connectors, larger than SFP+. QSFP+: Quad small form-factor pluggable supporting 40 Gbit/s, using MPO fiber connectors. QSFP28: Supports 100 Gbit/s or 40 Gbit/s, compatible with QSFP+ interfaces.

CF

P (Centum Form-factor Pluggable): Larger modules for high-capacity data communication and telecom applications. QSFP-DD (Double Density): High-density modules for 400G networks, with power consumption around 12–14 watts per module.

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Advanced High-

Speed Modules

For AI and data center scenarios, Huawei provides modules ranging from GE to 800GE, emphasizing three capabilities: Spanning (ultra-long transmission), Stable (high reliability), and Secure (enhanced security). These modules support high-bandwidth, low-latency connections and are designed for resilient data center interconnectivity. Photonic Chip TechnologyHuawei's optical modules leverage self-developed photonic chips, including:oDSP (Optical Digital Signal Processing) chips in the OptiXtreme series, supporting adjustable single-wavelength rates from 100G to 600G, with spectrum efficiency up to 8 bit/s/Hz.

Thin Film Lithium Niobate (TFLN) modulators, increasing bandwidth by 50% and reducing power consumption by 30% compared to traditional indium phosphide modulators. Modules for 400G/800G transmission integrate silicon photonic chips for optical-electrical integration, reducing power consumption by 30% and extending transmission distances.

Fiber and Wavelength Options

Huawei optical modules are available for single-mode and multimode fibers: Single-mode modules: Support long-distance, high-capacity transmission. Multimode modules: Lower cost, suitable for short-distance, small-capacity applications. Modules also support wavelength division multiplexing (WDM): CWDM (Coarse WDM) and DWDM (Dense WDM) allow multiple wavelengths on a single fiber, improving efficiency and reducing fiber usage.

SummaryHuawei's optical modules cover a broad spectrum of form factors, transmission rates, and fiber types, from standard SFPs to high-speed 800G modules with advanced photonic chips. They are designed for data centers, AI clusters, and telecom networks, offering high reliability, long-distance transmission, and flexible plug-and-play deployment options.

Article Content

What Is an Optical Module and Its FAQs (V200)

Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key performance counters, common types, and naming conventions of optical modules, causes of

What Is an Optical Module and Its FAQs (V300)

You can identify a Huawei-certified optical module by checking the label attached on the optical module. If the label has a Huawei logo, the optical module has been certified for Huawei data

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WHAT IS AN OPTICAL MODULE AND ITS FAQS (V200)

CloudEngine series switches must use optical modules that are certified for Huawei data center switches. Optical modules that are not certified for Huawei data center switches cannot ensure

Huawei Unveils StarryLink Optical Modules That Deliver Ultimate

BARCELONA, Spain, March 6, 2025 /PRNewswire/ -- At the Mobile World Congress 2025 (MWC 2025), Huawei launched the StarryLink optical modules, designed to enhance network experiences with "3S"...

Huawei PON SFP Modules | GPON XG-PON XGS-PON & 50G-PON

Huawei PON SFP modules are carrier-grade optical transceivers designed for GPON XG-PON XGS-PON & 50G-PON broadband access networks.

Huawei Optical Module Common Models

Optical modules are important devices in fiber optic communication systems. Huawei Optical Module is manufactured by Huawei Technologies Co. and originated in Shenzhen.

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.

Optical Modules for Huawei S Series Switches

A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service

What Is an Optical Module and Its FAQs (V300)

Fundamentals of an Optical Module As an important part of fiber-optic communication, an optical module is a photoelectric converter which converts electrical signals into optical signals and

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,

Displaying Optical Module Information

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Therefore, non-Huawei-certified switch optical modules are not recommended. When a non-Huawei-certified switch optical module is used, the following problems often occur: The optical module cannot

Understanding Optical Modules

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

Future All-optical Network Architecture and Key Technologies

New Solutions Future All-optical Network Architecture and Key Technologies Evolving towards the 2030 optical communications network system and architecture is a key issue facing the optical

Types of Optical Modules

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

Optical Modules in Intelligent Computing Scenarios

Huawei provides a full series of pluggable optical modules. A wide variety of modules give you flexible plug-and-play options for all types of interfaces.

Huawei Unveils StarryLink Optical Modules That ...

At MWC Barcelona 2025, Huawei introduced the StarryLink optical modules, aimed at creating a network experience with "3S" quality (Spanning, Stable, Secure). This launch took place

Optical Modules in General-Purpose Computing Scenarios

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models providing flexible plug-and-play solutions tailored to diverse interface

Understanding Optical Modules

This document explains optical modules, their types, and applications, providing a comprehensive understanding of their functionality and usage.

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