

What does 28 on the optical module represent



AI Overview

The "28" in SFP28 indicates that the module supports a data rate of 25 Gbps per lane. SFP28 (Small Form-factor Pluggable 28) is a high-speed optical transceiver designed for 25G Ethernet and 32G Fibre Channel applications. The "28" does not refer to the physical size but rather to the enhanced electrical interface capable of handling 25 Gbps, which is higher than the 10 Gbps supported by SFP+ modules. SFP28 modules are physically identical to SFP and SFP+ modules, allowing backward compatibility while providing higher bandwidth for modern networks.

Key Features of SFP28

- Speed:** Supports 25 Gbps per lane, enabling 100G aggregation when used in four-lane configurations (4x25G) for QSFP28 modules.
- Use Cases:** Ideal for data center access layers, 100G aggregation, and high-speed SANs. It provides a cost-effective upgrade path from 10G networks.
- Compatibility:** SFP28 modules are backward compatible with 10G and 25G Ethernet, making them versatile for mixed-speed environments.
- Form Factor:** Same compact size as SFP and SFP+, allowing high port density in switches and routers.
- Applications:** SFP28 modules are widely used in modern enterprise networks, data centers, and carrier-grade deployments. They support both Ethernet and Fibre Channel protocols, providing reliable, high-speed connectivity while maintaining compatibility with existing infrastructure. They are also a key building block for 100G networks, where four SFP28 lanes can be combined in QSFP28 modules to achieve 100 Gbps throughput.

In summary, the "28" in SFP28 signifies the module's capability to handle 25 Gbps per lane, offering higher bandwidth than previous SFP generations while maintaining the same physical form factor for easy deployment and backward compatibility.

Article Content

SFP Optical Module Specifications: Standards & Performance

SFP (Small Form-factor Pluggable) optical modules are compact, hot-pluggable transceivers that enable network equipment to connect seamlessly to fiber and copper links. These

Understanding Optical Modules: Working Principles,

Explore the working principles, structures, and performance metrics of optical modules, essential components of optical fiber communication

What is QSFP28 optical module and how it works

The full name of QSFP28 optical module is 100G optical module, which is one of the popular and mainstream 100G optical modules on the market. Due to its low power consumption and

Cisco Compatible Optical Modules Catalog

ing of parameters such as optical output power temperature, and bias current. This architecture integrates advanced retiming and clock data recovery (CDR) circuits for high-speed modules (10G

What Is an Optical Module

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the receiver needs to convert received optical signals into electrical signals.

What Is an SFP Optical Module? Guide | PHILISUN

SFP28 supports data rates of 25 Gbps and is fundamental to modern cloud and hyper-scale data centers. It enables the next generation of server-to

100G QSFP28 BiDi Optical Module: Features, Benefits, and Use Cases

100G QSFP28 BiDi Optical Module Selection Guide Choosing the right 100G QSFP28 BiDi transceiver requires careful consideration of transmission distance, existing fiber type, fiber

Why is the optical module rate 14.025 Gbps for 16G FC

How is the actual transmission rate of the optical module corresponding to each data category converted? Below is a screenshot of the

The FOA Reference For Fiber Optics

Fiber Optic Measurement Units: "dB" and "dBm" Whenever tests are performed on fiber optic networks, the results are displayed on a power meter, OLTS or OTDR

Selecting the Perfect 100G Optical Module Packaging:

100G optical module have emerged as essential components in the fast-paced world of data centers and network communications,. With a plethora

QSFP28 Fibre Optic Transceiver Technology Overview

A QSFP28 is a Quad (4-channel) small form factor hot pluggable fibre optic transceiver used for 100 Gigabit Ethernet (100GbE) data communications applications. The QSFP28 integrates 4 transmit

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical modules typically have an electrical interface on the side that

What does 28 mean in QSFP28□

28 in QSFP28 refers to the number of gigabits per second that can be transmitted by the QSFP28 transceiver. It stands for Quad Small Form-factor Pluggable 28, and it is designed for 100G

Optical Module Package Types Overview

Optical transceiver module (optical transceiver), referred to as optical module, is an important device in optical communication system. There are many

100G Optical Module Selection Guide: Advantages and Types of

Explore the QSFP28 100G optical module, a vital component for high-speed network connections. Discover its unique features, advantages, and various types to meet diverse

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

Common optical module package types: SFP, SFP+,

Choose optical modules that support the appropriate speed for your application, such as 1Gbps, 10Gbps, 25Gbps, 40Gbps, or 100Gbps. Package

SFP28 Transceiver: A Complete Guide

The SFP28, standing for Small Form-factor Pluggable 28 Gigabit, is a hot-swappable optical transceiver module used for high-speed data transmission in networking applications.

How to Choose Optical Modules Correctly?

How Optical Modules Operate Transmitter Optical Sub Assembly (TOSA) The TOSA manages light emission, converting electrical signals to

SFP, SFP+, SFP28, QSFP+ and QSFP28 optical modules

So, what is the difference between these optical modules? This article will analyze the characteristics and uses of these optical modules in detail to help you choose the appropriate optical

Understanding Optical Modules

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the receiver needs to convert received optical signals into electrical signals.

What does QSFP28 mean?

QSFP28 stands for Quad Small Form-Factor Pluggable 28. It is a compact, high-density, hot-pluggable transceiver module used in data communication and telecommunication applications.

An In-depth Guide to 25G SFP28 Optical Transceiver

Consider aftermarket or third-party options versus OEM for budget flexibility.
Conclusion & Call to Action The 25G optical transceiver, particularly the 25G

Demystifying SFP28: The Essential Guide to 25G

SFP28 is a 25G transceiver module for fast, efficient data transfer in modern networks, offering high speed, compatibility, and energy savings.

Understanding Optical Modules: A Comprehensive Guide

Optical Module Basics: Understanding the Core Concepts Optical modules are compact devices that convert electrical signals into optical signals

25G SFP28 LR versus SR Optics Why it Matters

We take a look at 25G SFP28 optics and discuss LR versus SR optics and why that distinction matters if you want to connect devices

Introduction to Optical Fibers, dB, Attenuation and Measurements

This document is a quick reference to some of the formulas and important information related to optical technologies. This document focuses on decibels (dB), decibels per milliwatt (dBm),

What Is an SFP Module? — Complete Guide to SFP, SFP+ & SFP28

SFP28 modules are widely used for 25G server uplinks, while higher-speed optics are aggregated at the spine. This model simplifies cabling, improves scalability, and aligns with modern NIC capabilities.

Contact Us

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