

Selection Guide for Metro-Grade Low-Power Optical Modules QSFP28



Overview

This guide provides a systematic selection process to help you choose the right QSFP28 module every time. You will learn how to verify form factor compatibility, match fiber and distance requirements, validate switch compatibility, consider thermal constraints, and avoid. This guide provides the definitive roadmap for selecting, deploying, and troubleshooting QSFP28 transceivers while bypassing the painful trial-and-error phase. Below, you will find comprehensive module comparisons, realistic market pricing, and precise vendor compatibility protocols to ensure a. QSFP28, or Quad Small Form-factor Pluggable 28, is the industry-standard form factor for 100 Gigabit Ethernet. It uses four electrical lanes to deliver a total throughput of 103.1 Gbps, with each lane operating at 25. This 4x25G design is what separates QSFP28 from its 40G predecessor. Whether you are considering 40G QSFP+, 100G QSFP28, or the latest 400G QSFP-DD modules, understanding the technical specifications, compatibility requirements, and deployment scenarios is essential to make informed decisions. This guide explores the key types, specifications, and advantages of 100G SMF QSFP28 modules, empowering network engineers to make. Cisco® QSFP28 100G ZR extends 100GbE coherent links from QSFP28 ports reaching up to 80km over dark fiber and up to 300km over amplified Dense Wave Division Multiplexing (DWDM) links. The Cisco QSFP28 100G ZR module expands the portfolio of digital coherent optics (DCO) modules to connect QSFP28.

Article Content

May 21, 2026

100G QSFP28 Single Mode Transceivers: Types, Specs, and

This guide explores the key types, specifications, and advantages of 100G SMF QSFP28 modules, empowering network engineers to make informed deployment decisions.

Oct 17, 2025

Network-Switch 100G Optical Transceiver Modules: A Practical Guide

This guide breaks down NS-branded QSFP28 modules—SR4, LR4, and DR—with practical advice on reach, fiber types, connectors, power, DOM, interoperability, and lifecycle management.

Oct 13, 2025

100G Optical Module Selection Guide: Advantages and Types of QSFP28

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 transmission needs.

Jul 15, 2025

QSFP28 Transceiver: Complete 100G Connectivity Guide (2026)

QSFP28 transceiver guide covering module types, pricing, compatibility, and deployment. Learn how to choose, deploy, and troubleshoot 100G QSFP28 optics.

May 31, 2026

100G QSFP28 Optical Module Selection Guide: Medium to Long

This article tells you how to choose 100G QSFP28 modules for medium and long transmission distances, as well as the advantages of QSFP28 modules and why you should choose it.

Jan 31, 2026

SFP Optical Transceivers: How Pluggable Optics Are Reshaping

Compared to older GBIC (Gigabit Interface Converter) modules that preceded them, SFP transceivers occupy roughly half the physical space while delivering equal or superior performance.

Jan 28, 2026

Cisco QSFP28 100G ZR Digital Coherent Optics Module Data Sheet

The QSFP28 100G ZR can cost effectively extend 100G links to 80km on any fiber type, and is a cost-effective migration option of multiple 10G wavelengths to 100G.

Jun 02, 2026

How to Choose QSFP Modules: 40G, 100G & QSFP-DD Guide

Learn how to choose QSFP modules for 40G, 100G, QSFP28, QSFP56, and 400G QSFP-DD networks. Compare speed, distance, fiber type, compatibility, and LINK-PP products.

Mar 05, 2026

QSFP28 Module Types: Selection Guide for 100G Networks

Selecting the right QSFP28 module types comes down to three variables: distance, fiber infrastructure, and switch compatibility. Get any of these wrong, and you face costly returns,

Dec 16, 2025

Common 100G QSFP28 Optical Transceiver Types in the Market

Discover key differences between 100G Optical Transceiver Module types—BIDI, ER4, LR4 & SR4 and learn how to choose the right 100G QSFP28 Optical Transceiver .

Jul 09, 2025

100G QSFP28 SR4 Guide: Specs, Compatibility, Pricing

Learn 100G QSFP28 SR4 specs, compatibility, cabling, and cost factors. A practical guide for data center 100G SR4 deployment and short-reach network planning.

Mar 11, 2026

FS QSFP28 SR4 Optical Transceiver: High

Explore FS QSFP28 SR4 optical transceiver with low power consumption, perfect compatibility, and reliable performance for efficient data

Dec 06, 2025

How to Choose QSFP28: Complete 100G Selection Guide

Learn how to choose QSFP28 modules with confidence. Covers fiber matching, distance, switch compatibility, power budgets, and common selection mistakes.

Nov 18, 2025

QSFP28 Optical Transceiver 100 Gigabit Ethernet for up to 10 km Reach

The Lumentum 100G QSFP28 LR4 Optical Transceiver has several low-speed interface connections including a 2-wire serial interface (SCL and SDA). These connections include; Low Power Mode

May 09, 2026

QSFP28 Module Types: Selection Guide for 100G Networks

QSFP28 module types explained: SR4, LR4, CWDM4, ER4, PSM4, and emerging single-lambda options. Learn how to choose the right 100G transceiver.

Jul 18, 2025

Optical Transceiver Buying Guide: SFP/QSFP Explained for

Whether for data centers, enterprise networks, or service providers, choosing the right optical transceiver is critical for ensuring seamless, high-speed data transmission over fiber optic

Jul 31, 2025

How to Choose QSFP28: Complete 100G Selection Guide

This guide provides a systematic selection process to help you choose the right QSFP28 module every time. You will learn how to verify form factor compatibility, match fiber and distance

Sep 23, 2025

Dac Vs Aoc Vs Optical Modules: Cost & Performance Comparison For

Practical note: commodity 100G SR4 modules can be found at low-hundreds USD per unit (vendor listings show SR4 QSFP28 examples near US\$99 in some catalogs), whereas branded long-reach

Feb 27, 2026

A Complete Guide to Selecting 100G QSFP28 Optical

Choosing QSFP28 optical transceivers that fit your system helps your network work well and keeps your money safe. This definitive guide cuts through

May 19, 2026

The Ultimate Guide to SFP, SFP+, SFP28, QSFP+, and QSFP28:

This guide decodes critical distinctions between SFP, SFP+, SFP28, QSFP+, and QSFP28 modules—covering form factors, channel architectures (single vs. quad), and performance

Feb 21, 2026

Dac Vs Aoc Vs Optical Modules: Cost & Performance Comparison For

Inleiding Modern data centers demand a careful balance of cost, latency, power and reach when choosing interconnects. This comparison focuses on three dominant choices— DAC/AOC pairings

Aug 27, 2025

What Is QSFP28 LR4? In-Depth Analysis of Long

QSFP28 LR4 modules enable reliable long-distance 100G fiber optic links up to 10km, combining 4x25G lanes with WDM technology for high

Aug 29, 2025

The Ultimate Guide to Cisco QSFP28 Transceiver Modules for 100G ...

Discover the wide range of high-density and low-power 100G Ethernet connectivity options offered by Cisco's QSFP28 transceiver modules for data center and high-performance computing

Jun 01, 2026

100G QSFP28 Optical Module Selection Guide: Medium to Long

The QSFP28 module can increase the data transmission rate of 100Gbps, which can effectively meet high bandwidth requirements. And because they are transmitted through optical

Mar 01, 2026

QSFP28 Transceiver: Complete 100G Connectivity Guide

This guide equips network engineers with everything they need to know about QSFP28 optical transceivers — from module types and specifications to switch compatibility, power

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