

Selection Guide for Backbone Network Grade Optical Line Terminal QSFP28



Article Overview

Choosing the right QSFP28 module requires matching fiber type, reach, connector, and switch compatibility to your network's 100G backbone requirements.

Understanding QSFP28

QSFP28 (Quad Small Form-factor Pluggable 28) is a hot-pluggable optical transceiver designed for 100G Ethernet, using four 25G NRZ lanes to achieve 100 Gbps payload capacity (). It supports high port density in switches and routers and is backward-compatible with QSFP+ ports for 40G operation, though signaling differences must be considered (). QSFP28 modules can use multimode VCSELs, single-mode DFB lasers, or PAM4 single-lambda optics, depending on the variant ().

Key Selection Criteria

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Fiber Type and Reach

- SR4 (Short Reach, Multimode Fiber): Up to 70m on OM3, 100m on OM4, 150m on OM5; uses MTP/MPO-12 connectors with 8 fibers (4 Tx, 4 Rx). Ideal for top-of-rack or intra-rack links ().
- LR4/CWDM4 (Long Reach, Single-Mode Fiber): Typically up to 10 km; uses 4 wavelengths over SMF. Suitable for intra-data center or campus backbone links ().
- Single Lambda SMF: Supports intermediate distances (~500m) over single-mode fiber, useful for future-proofing or existing SMF infrastructure ()....

Article Content

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,

100G QSFP28 Transceivers: Types, Specs and How to Choose

In this guide, we provide a comprehensive, practical overview of 100G QSFP28 modules, covering their working principles, module

Guide to QSFP28 Transceivers for 100G Data Center Connectivity

However, there are several types of 100G optics (transceivers and cables) available on the market like the CFP, CFP2, CFP4 and

What Is QSFP28? A Clear Explanation of 100G Transceivers

Learn what QSFP28 is, how 100G transceivers work, key standards, module types, and common deployment scenarios in modern

100G QSFP28 Transceivers: Types, Specs and How to Choose

A complete guide to 100G QSFP28 transceivers covering types, specs, reach, compatibility, and how to choose the right module for

A Comprehensive Guide to 100G Optical Transceiver 2025

A Comprehensive Guide to 100G QSFP28 Optical Transceiver 2025 Modern data centers rely on high-speed optical links, and

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.gmarkconstruction.co.za>

Email: sales@gmarkconstruction.co.za

Phone: +31-6-15-38-72-94

Address: Herengracht 456, 1017 BS Amsterdam, Netherlands

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