

Selection Guide for OSFP Optical Line Terminal in IDC Internet Data Center



Article Overview

OSFP modules are high-density, high-performance optical transceivers designed for 400G to 1.6T networks, offering superior thermal management, scalability, and port density for modern data centers.

Key Considerations for Selecting OSFP Modules

1. Data Rate and Lane Configuration OSFP modules support multiple speeds depending on the variant:

- Standard OSFP: 8 lanes at 50G PAM4 (400G), 8 lanes at 100G PAM4 (800G), or 8 lanes at 200G PAM4 (1.6T) ().
 - OSFP-XD (Extended Density): 16 lanes, doubling faceplate density, supporting up to 800G (16x50G), 1.6T (16x100G), or 3.2T (8x200G) (). This flexibility allows scaling from current 400G deployments to future 1.6T networks without redesigning the entire infrastructure.
2. Thermal Management OSFP modules integrate heatsinks to dissipate up to 25W of power, making them suitable for high-power applications like AI training backplanes and dense Ethernet fabrics (). Variants include:
- Standard OSFP: Integrated heatsink (open or closed top).
 - OSFP-RHS: Requires an external riding heatsink, offering flexibility in cooling solutions (). Effective thermal design ensures signal integrity and module longevity in high-density racks.
3. Port Density and Form Factor
- OSFP modules are 23% wider and thicker than QSFP form factors, supporting up to 36 ports per 1RU switch ()....

Article Content

OSFP Connector System

The Octal Small Form Factor Pluggable (OSFP) Connector System provides single- or dual-port, 8- or 16-lane I/O connectivity with

Understanding OSFP: The Future of Transceivers in High-Speed

Explore the OSFP transceiver: a high-speed, future-ready solution for data centers. Learn its advantages in bandwidth, thermal

OSFP OCTAL SMALL FORM FACTOR PLUGGABLE MODULE

Abstract: This specification defines the electrical connectors, electrical signals and power supplies, mechanical and thermal

OSFP CONNECTORS, CAGES & CABLE ASSEMBLIES

TE Connectivity's (TE) Octal Small Form Factor Pluggable (OSFP) connectors, cages and cable assemblies address next-generation

Introduction to OSFP Optical Transceiver

OSFP is short for Octal Small Form Factor Pluggable. it is being designed to use eight electrical lanes and each lane for 50GBE to

CommScope® Enterprise Data Center Design Guide

How To Use This Guide Data Center design can be significantly different than that of traditional structured cabling design for

Contact Us

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