

Canadian Optical Modulator OSFP



Article Overview

OSFP (Octal Small Form Factor Pluggable) is a high-speed, open-standard optical transceiver designed for 400G and 800G Ethernet applications, offering eight electrical lanes and enhanced thermal management for modern data centers and AI-driven networks.

Overview of OSFP

OSFP stands for Octal Small Form Factor Pluggable, a pluggable optical transceiver standard optimized for ultra-high bandwidth and density. The "Octal" refers to its eight independent electrical lanes, which distinguishes it from traditional four-channel modules like QSFP. The compact, hot-pluggable design allows installation, replacement, and maintenance without powering down equipment, making it ideal for high-performance computing and hyperscale data centers.

Technical Specifications

- Form Factor Dimensions: $100.4 \times 22.5 \times 13 \text{ mm}^3$, slightly larger than QSFP but optimized for thermal performance.
- Bandwidth: Supports 400G (8x50G PAM4) and 800G (8x100G PAM4) configurations.
- Power Dissipation: Designed to handle 15-20W, with integrated top-side heat sinks to improve heat dissipation by 15-20%.
- Electrical Lanes: Eight lanes per module, each capable of 50-100G PAM4 signaling, providing high aggregate bandwidth.
- Standards Compliance: Compatible with IEEE 802.3bs and 802.3cd for 400G Ether...

Article Content

May 12, 2026

Small Form-factor Pluggable

An even larger sibling, the Octal Small Format Pluggable (OSFP), had products released in 2022 capable of 800 Gbit/s links

Jun 28, 2026

CFP2-DCO vs QSFP-DD DCO vs OSFP-DCO What's the

In the field of coherent optical communication, coherent modulation and heterodyne detection technologies play a

Oct 24, 2025

Optical Modulators – acousto-optic, electro-optic

Optical modulators are devices allowing one to manipulate properties of light beams, such as the optical

Jun 04, 2026

Lightrend

Lightrend Tech Limited, founded in 2020 and located in Wuhan, Optics Valley of China, Lightrend is a manufacturer that specializes

Oct 28, 2025

800G Client Optics in the Data Center

Data center interconnect links that had previously relied on separate optical transport systems with integrated coherent transceivers

Nov 18, 2025

DCI Optical Modules | Delivering high bandwidth over distance

The Marvell data center interconnect portfolio includes COLORZ®, COLORZ® 400 and COLORZ® 800 modules in multiple form

Jan 31, 2026

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

Sep 14, 2025

Top Optical Modules for POTN Deployment: SFP, QSFP, and OSFP

Modern optical transport networks are the nervous system of digital infrastructure. As data demand continues to

Mar 09, 2026

Global | Technologie Optic.ca Inc.

Precision optical solutions. Built for networks that cannot afford uncertainty. 1G to 1.6T. Coded and tested

Apr 14, 2026

OptiModule — High-Performance Optical Transceivers 10G to 800G ...

OptiModule by eSeeSky Inc. — Enterprise optical transceivers from 10G to 800G. SFP+, QSFP28, QSFP-DD, OSFP. MSA

Dec 05, 2025

The Ultimate Guide to OSFP Transceivers: Unveiling 400G Optical ...

Dive into the complexities of OSFP transceivers for 400G optical connectivity with Fibermall's ultimate guide.

May 03, 2026

OSFP Optical Module Market Competitive Landscape Report 2035

OSFP Optical Module Market Overview: The OSFP Optical Module Market Size was valued at 1,300 USD Million in 2024. The OSFP

Aug 22, 2025

OSFP Connector System

OSFP connectors are slightly larger than QSFP-DD connectors but offer increased thermal performance and signal integrity at high

Jan 06, 2026

OSFP MSA Rev 5

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

Feb 07, 2026

800G Optical Transceiver Overview: QSFP-DD and OSFP Packages

This article provides an overview of 800G optical transceivers, focusing on the QSFP-DD and OSFP packages.

Oct 13, 2025

OSFP OCTAL SMALL FORM FACTOR PLUGGABLE MODULE

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

Aug 05, 2025

OSFP OCTAL SMALL FORM FACTOR PLUGGABLE MODULE

Below sub-sections illustrate block diagrams for a sampling of optical physical medium dependent sublayers (PMDs) that can be

Dec 11, 2025

CFP Optical Module: Complete Guide, Types, and 100G Use Cases

Understand CFP optical modules, including types, 100G applications, pros and cons, and CFP vs QSFP28

Jul 12, 2026

400G OSFP Transceiver Optics Types and Connections

The Octal Small Form Factor Pluggable (OSFP) module is an optical transceiver designed to provide high speed

Aug 30, 2025

Everything You Need to Know About osfp112: The Future of

What is osfp112 and How Does It Work? Understanding osfp112 Transceiver Technology To attain higher data rates

Aug 02, 2025

Exploring the World of 400G OSFP Transceiver: Types, Connections,

Explore different types of 400G OSFP transceivers & their optical connections, including OSFP SR8, DR4, FR4.

Sep 27, 2025

OSFP Transceivers: High-Density Optical Connectivity from 400G to

As hyperscale data centers shift toward AI-optimized fabrics and ultra-high-bandwidth switching platforms, the OSFP

Aug 25, 2025

About us – Technologie Optic.ca Inc.

A proud Canadian R& D and manufacturing company, founded in Quebec, combining local production with

Jun 17, 2026

Innovation Trends in OSFP Optical Module: Market Outlook 2026-2034

The OSFP optical module market is booming, driven by high-bandwidth demands in data centers and HPC. Explore

Aug 25, 2025

Optical Transceiver Market Size, Share, Analysis 2030

The global Optical Transceiver Market size in terms of revenue was estimated to be worth \$13.6 billion in 2024 and is poised to reach

Oct 24, 2025

The Big Differences Between SFP, SFP+, SFP28, QSFP+, QSFP28,

QSFP-DD (Double Density) and OSFP (Octal Small Form Factor Pluggable) These are the next-gen optical modules.

May 23, 2026

400G OSFP/QSFP112/QSFP-DD | Transceiver Modules

FS provides an expanding portfolio of 400G OSFP/QSFP112/QSFP-DD solutions featuring high-performance, high-bandwidth, and

Contact Us

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