

Selection Guide for OSFP Air-Cooled Switches Used in Supercomputing Centers



Overview

In this article, you will find the complete 2026 cross-vendor reference for OSFP compatible switches, including specific models, OSFP variant requirements (IHS, RHS, XD, twin-port vs single-port), port density, breakout capabilities, and a practical selection . In this article, you will find the complete 2026 cross-vendor reference for OSFP compatible switches, including specific models, OSFP variant requirements (IHS, RHS, XD, twin-port vs single-port), port density, breakout capabilities, and a practical selection . In April 2026, a procurement engineer at a North American hyperscaler placed an order for 800 OSFP transceivers, only to discover three weeks later that the destination switches required the OSFP-RHS variant rather than the standard OSFP-IHS form she had ordered. Three weeks of project delay. FIBERSTAMP OSFP modules offer flexible packaging options to match different cooling scenarios, helping you maximize performance and energy efficiency. Top fins improve airflow and cooling 13.00 mm height, air-cooled switches compatible Ideal for traditional rack-mounted switches Example: 800G OSFP. The OSFP (Octal Small Form Factor Pluggable) has become one of the most widely adopted pluggable form factors for 800G optical modules in high-performance computing (HPC), artificial intelligence (AI) clusters, and data center switches. With its high thermal dissipation capability and flexible. It's about physical architecture — specifically, whether to deploy OSFP-IHS or OSFP-RHS modules. Get it right and you've built a foundation that scales cleanly through the next wave of AI infrastructure. RHS Decision Matrix Scaling to 800G brings a critical fork in the road for thermal management: Integrated Heat Sinks (IHS) versus Riding Heat Sinks (RHS).

Article Content

Understanding OSPF in Catalyst 1300X Switches

The objective of this article is to provide a comprehensive understanding of Open Shortest Path First (OSPF) routing protocol, its fundamental concepts, operational mechanisms, and its

OSFP Compatible Switches: 2026 Vendor Guide for 400G/800G

Complete OSFP compatible switches guide covering Cisco, Arista, Juniper, NVIDIA. 400G/800G platform compatibility, port density, and selection.

Industry First 1.6T Liquid Cooled Switch: QFX5250-64OE-L

Built for Modern Data Centers The QFX5250-64OE-L liquid-cooled switch uses direct-to-chip cooling and meets Open Compute ORv3 standards, helping manage the power and thermal

Why 1.6T Optical Transceivers Overtake 800G in 2026

Which Fiber Connector Types Support 1.6T OSFP Transceivers for High-Density Data Center Deployments? 1.6T OSFP transceivers require MPO-16 connectors

800G OSFP IHS vs RHS: Complete Selection Guide | 2026

800G OSFP Guide: IHS vs RHS Selection for AI Data Centers IHS vs RHS Selection for AI Data Centers. Everything network architects need to know about 800G form factors — from

Lenovo NVIDIA GB300 NVL72 Rack Scale AI Product Guide

The GB300 NVL72 uses a hybrid cooling architecture: CPUs, GPUs, and NVSwitch components are liquid-cooled, while OSFP modules, storage drives, and PDB components are

OSFP Thermal Management: Complete Data Center Cooling Guide

This guide provides everything needed to manage 800G switches and handle 1.6T migration while selecting modules and solving thermal problems. For comprehensive OSFP

FiberMall Launches Liquid-Cooled Optical Modules and AOCs, Driving ...

FiberMall, a global leader in optical communication solutions, today officially announced the launch of multiple liquid-cooled optical modules and active optical cables (AOCs) spanning data

The Ultimate Guide To Buying Data Center Switches: Your

As AI and HPC requirements grow, choosing the right data centre switch becomes more complex. Unlike switches used for traditional layer2/3 enterprise networks, data centre switches have

400G OSFP/QSFP-DD/QSFP112 Module Introduction and Selection Guide

This article explores the technical characteristics, product lineup, and use cases of 400G OSFP/QSFP-DD/QSFP112 modules to choose the most suitable 400G solution for your data centers.

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

The selection of 400G OSFP optical modules should take into account transmission distance, fiber type, power consumption, cost, and future scalability. With the growing adoption of

Finned-top and Flat-top Design in 400G/800G Optical Transceivers

In the 800G OSFP series, SR8, DR8, and FR8 optical transceivers use a finned-top design (though there is an SR8 and DR8 variant used for InfiniBand networks that utilizes a flat-top

A Supercomputing Center Experience With Cooling Control Design

In addition the NCAR site had to be capable of cooling both air-cooled and water-cooled computer equipment inside of the data center. The use of a water-side economizer and back-up compressor

Complete Guide to OSFP Transceiver: 400G/800G/1.6T

Master OSFP transceiver technology with our comprehensive guide. Covers 400G/800G/1.6T speeds, OSFP vs QSFP-DD comparison, thermal management, and AI

NVIDIA Spectrum-4 SN5000 2U Switch Systems Hardware User Manual

The OSFP-based optical transceivers have two distinctive ports that can be used as OSFP transceivers inserted to the switch in a "belly-to-belly" configuration, meaning that the transceiver on the top will

OSFP Thermal Form Factors Explained: Finned Top, Closed Top

This article explains why multiple OSFP thermal form factors exist, compares the structural differences between OSFP-IHS and OSFP-RHS, and provides guidance on selecting

Choosing the Right OSFP: Balancing Performance and Thermal

As AI supercomputing, HPC, and next-gen data centers evolve, high-speed connectivity isn't enough—efficient thermal management is now critical. FIBERSTAMP OSFP modules offer flexible

NVIDIA Optical Transceivers: QSFP-DD/OSFP 800G Solutions

Complete guide to NVIDIA optical transceivers covering QSFP-DD and OSFP form factors for 800G networks. Learn about compatibility, deployment best practices, and selection

800G OSFP in AI Data Centers: IHS or RHS — Getting the Decision

This guide covers everything you need to make that call with confidence: what each architecture actually is, which equipment requires which form factor, how to plan your optical reach

OSFP Thermal Form Factors Explained: Finned Top, Closed Top

OSFP-IHS designs are commonly used in traditional Ethernet and InfiniBand switches where airflow management is handled primarily at the system fan level. What Is OSFP-RHS (Riding

Understanding 400G and 800G OSFP Transceiver: Finned-Top vs.

Discover the key features of finned-top and flat-top 400G/800G OSFP transceivers and learn how to choose the right one for your network needs.

Data Center Cabling: Standards Guide, BICSI vs TIA

The complete guide to data centre cabling in 2026 — deep comparison of TIA-942-C, BICSI 002-2024, ISO/IEC 24764, EN 50600, and

OCP ACF Reference Design Guidance White Paper

Pipe Material Selection There are a broad spectrum of materials that have been used in data center liquid distribution. The scope of discussions exceeds the focus of this paper, and varies significantly

Building a State-Of-Art AI Modern Data Center: Complete Guide to

From GPU Silicon to Campus-Scale Coherent Transport — Building a State-Of-Art AI Modern Data Center: Complete Guide to Scale-Up, Scale-Out for Petaflop and Exaflop and towards

800G OSFP

By selecting the right OSFP form factor based on cooling strategy (air vs. liquid) and system layout, operators can maximize module performance, thermal efficiency, and energy savings.

Fiber Optic Connector Types: Full Comparison & Selection Guide

Fiber Optic Connector Types: Full Comparison & Selection Guide LC, SC, FC, ST, MPO/MTP compared: ferrule sizes, polishing types, insertion loss, and a decision flowchart to

800G OSFP Architecture: IHS vs RHS Decision Matrix

We created this guide to clarify the physical requirements for your host equipment: □□
The Switch Path (IHS): Air-cooled switches (like Spectrum-4 SN5600 & Quantum-X800) rely on...

Contact Us

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