OSFP optical modules air-cooled and liquid-cooled



Overview

Single, dual and multi light-pipe versions are available along with air- and liquid-cooling designs (heat sinks and cold plates), reducing engineering challenges by offering flexible options to support a large variety of applications. 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. As pluggable modules scale to 400G and beyond, thermal management becomes a primary reliability constraint. 6T. OSFP-IHS is the standard and most widely deployed OSFP thermal solution. These input/output (I/O) solutions support aggregate data rates up to 1. 6Tbps, helping data centers meet AI-driven capacity demands with minimal. Cofan's air-cooled OSFP thermal modules are engineered to meet the growing thermal demands of next-generation AI servers and high-speed telecommunications infrastructure.

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Article Content

From Airflow to Liquid Cooling: A Deep Dive into 800G

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

OSFP Optical Module Thermal Design: Structure, Heat Dissipation ...

Explore how OSFP optical modules are thermally designed for optimal cooling and reliability. Learn about airflow impedance, gradient fins, heatsinks, and cooling solutions for 400G+

Beyond Air Cooling Limits: OSFP-RHS Optical Modules and the

HaloWill explains the advantage of OSFP-RHS flat-top optical modules in liquid-cooled architectures, helping you tackle the thermal challenges of the Blackwell era.

OSFP-IHS vs. OSFP-RHS: Choosing the Right Thermal

Compare OSFP-IHS and OSFP-RHS thermal designs for 800G and 1.6T optical modules. Learn how to choose the right OSFP solution for air-cooled, liquid

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 DAC, AOC, ACC and optical

OSFP Thermal Solutions | Cofan Thermal

Supporting optical transceivers from 800G up to 3.2T, Cofan''s solutions are also adaptable to both air- and liquid-cooled systems, ensuring efficient thermal performance across a wide range of

OSFP Thermal Management: Complete Data Center Cooling Guide

The OSFP modules establish connections between different regions through their two types of flat-top (RHS) and finned-top (IHS) modules, which link liquid-cooled servers to air-cooled

OSFP IHS (Integrated Heat Sink) vs OSFP RHS (Riding

For environments planning to transition from air cooling to liquid cooling, OSFP-RHS strikes a good balance between compatibility, deployment

OSFP Thermal Form Factors Explained: Finned Top, Closed Top, and

By understanding the differences between OSFP-IHS and OSFP-RHS, and by carefully matching Finned Top, Closed Top, or Flat Top OSFP modules to the target platform, network

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XPO: Redefining Pluggable Optics for AI Networking

By combining a dual-paddle mechanical architecture, integrated liquid-cooling cold plate, clean linear electrical channel, and high-voltage power delivery, XPO dramatically increases optical density while

$LITE $COHR $CIEN $AAOI EXECUTIVE OVERVIEW Across the

LightCounting''s January 2026 note framed Arista and Google as not planning CPO at that point, but by March 2026 Arista had launched the XPO MSA, a dense liquid-cooled pluggable architecture for AI

XPO Transceiver Overview: What is the Difference Between CPO?

Current mainstream pluggable optical module form factors (such as OSFP) are approaching physical density limits as bandwidth increases. When chip bandwidth continues to grow

OSFP Future Roadmap: 800G to 1.6T Data Center

Explore the OSFP roadmap from 800G to 1.6T. Compare OSFP vs QSFP-DD and plan your 2025-2027 data center deployment with our complete

Alpha Networks Inc. (via Public) / Alpha Networks Adopts Latest ...

In response, the 1.6T switch developed by Alpha Networks adopted a liquid-cooled solution that delivers more than 1.8 KW of cooling on each liquid-cooled board. The smaller footprint

Cisco launches 102.4T Silicon One G300 for AI centers | CSCO Stock

Cisco (NASDAQ: CSCO) unveiled the Silicon One G300, a 102.4 Tbps switching silicon, plus new G300-powered N9000 and 8000 systems, advanced optics, liquid-cooled designs, and

Lenovo NVIDIA GB300 NVL72 Rack Scale AI Product

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

800G OSFP800 Electrical Interface Failure in Data Centers

800G OSFP800-SR8 electrical interface failures are increasingly driven by connector degradation, power integrity issues, DSP equalization limits, and CMIS/I2C management instability in

Cisco Announces Silicon One G300, Advanced Systems and Optics

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These advancements deliver a major leap forward in power-efficient, high-performance AI infrastructure. Cisco N9000 and Cisco 8000 102.4T Systems: powered by Silicon One G300, deliver

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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