

Liquid-cooled switches and co-packaged optical switches



Overview

From Jensen Huang showcasing CPO switches at GTC 2025 to a wide range of vendors demonstrating optical engines integrated inside ASIC packages at OFC 2025, CPOs are everywhere. OFC 2025 made one thing clear: The transition to Co-Packaged Optics (CPO) switches in data centres is inevitable, driven primarily by the power savings they offer. Arista Networks shared some of its plans to deliver liquid-cooled switches and racks that can significantly reduce power consumption in. NVIDIA is developing a co-packaged optics (CPO) platform that integrates optical and electrical components to improve data-center connectivity, in collaboration with industry partners like TSMC. The NVIDIA Micro Ring Modulator silicon photonics engine is a key innovation, achieving 200Gbps PAM4. While the industry-standard OSFP (Octal Small Form-Factor Pluggable) module has successfully enabled 400Gbps, 800Gbps, and 1.6Tbps optical pluggable modules, it is limited to 32 modules per Rack Unit (RU), typically requiring 2 RUs to achieve 102. Cisco is actively innovating in direct-to-chip liquid cooling for high-performance switches, laying the groundwork for solutions that will enable seamless and.

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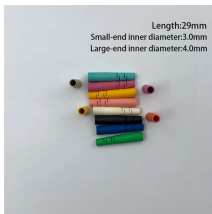
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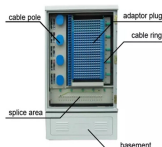
Arista executives discuss liquid-cooled networking gear and support for Linear Pluggable Optics to achieve power and cost optimization for AI data centers.



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For the unique architecture of CPO, this study analyzes its heat dissipation needs in detail, and a thermal management scheme is designed. The thermal management scheme is ...



The design accommodates up to 16 × 2U switch blades with tool-less installation, tightly located liquid quick disconnects, and generous space for cable ...



As a leader in optical interconnect technology, Gigalight is pioneering immersion liquid-cooling extenders and silicon photonics liquid-cooled optical modules, driving data centers toward ...



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Redefining high-performance connectivity with liquid-cooled co-packaged optics. At the Open Compute Project Foundation Global Summit 2025, one of the most talked-about demonstrations on...



With the rise of machine learning and artificial intelligence, data center power usage has increased continuously in recent years, and the bandwidth demand for switches continues to grow. As a result, ...



Take steps now to modernize your facility and thermal management strategies for tomorrow's liquid-cooled switches. Meet with your Cisco team or partner to discuss how to design, ...



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 ...

Contact Us

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