

Liquid-cooled computing power optical module





Overview

Liquid-cooled optical modules are particularly well-suited for high-power consumption scenarios such as AI/GPU clusters, supercomputing centers, and green data centers. While the industry-standard OSFP (Octal Small Form-Factor Pluggable) module has successfully enabled 400Gbps, 800Gbps, and 1.6Tbps, as a leader in optical interconnect technology, Gigalight is pioneering immersion liquid-cooling extenders and silicon. Liquid cooling technology, leveraging its higher thermal conductivity efficiency and energy-saving advantages, has been introduced into the optical module field, becoming a key direction for addressing the bottleneck of high-power heat dissipation. Power consumption can reach high values, especially in data centers supporting high data processing demands for advanced areas such as AI, machine learning and more.



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Advanced Thermal Management Strategies , Molex

Thermal management plays a pivotal role in enhancing the reliability and efficiency of high-power pluggable optical modules. Explore the latest strategies in air and

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Liquid Cooling Integration and Logistics White Paper

Liquid cooling using cold plates cooling technologies has been the focus of many technology papers and industry guidelines. It is known that liquid cooling is an efficient and effective cooling fluid for high

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Simulation and experimental investigation of liquid-cooling thermal

Abstract This study explores the application of cold plate liquid cooling technology in co-packaged optics (CPO). By integrating optical modules and the switch chip on the same substrate, CPO shortens the

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MiTAC Liquid Cooling Solution

Its liquid-cooled option helps maximize compute density while also enhancing cooling efficiency, ultimately improving overall data center energy efficiency. One compute module requires one liquid



Next-Gen AI Cooling by Stäubli at OCP

The new Mini-QD technology enables the liquid cooling of next-generation optical pluggable modules such as OSFP and QSFP devices that are

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Flex Announces Liquid-Cooled Rack and Power

Liquid-cooled servers and racks for AI workloads
Flex announced customizable, open standard-based, compute reference designs integrating

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Understanding Liquid-Cooled Optical Modules and Heat

Discover how liquid-cooled optical modules manage heat efficiently in high-speed data systems. Explore customized heatsink solutions.

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Solving Cooling Interconnects for Next-Gen Data

High-performance data center and AI workloads are power-intensive, outpacing efficiency improvements in air-cooling technology. Power requirements

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Gigalight Liquid-Cooled Optics: A Thematic Study on

As a leader in optical interconnect technology, Gigalight is pioneering immersion liquid-cooling extenders and silicon photonics liquid-cooled optical

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Cooling Solutions for HPC, AI & Data Centers , CoolIT

Engineered for tomorrow's workloads, CoolIT liquid cooling powers HPC, AI, and enterprise systems with efficient CDUs, cold plates and heat exchangers.

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Liquid-Cooled Optical Transceivers for 800G/1.6T

A liquid-cooled optical transceiver is a high-speed module that incorporates liquid cooling technologies (such as cold plates or microchannels)

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Gigalight Liquid-Cooled Optics: A Thematic Study on

Conclusion Gigalight's immersion liquid-cooling extenders and silicon photonics liquid-cooled optical modules represent the future of optical

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Stäubli Drives Next-Generation Liquid Cooling Standards for AI Data

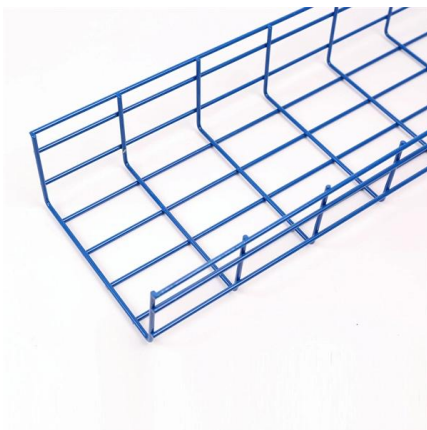
By integrating liquid cooling directly into the pluggable optical module, the Mini-QD removes thermal constraints that limit bandwidth expansion and system density.

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Liquid-cooled rack solutions to address power, heat, and scale

Liquid-cooled rack solutions to address power, heat, and scale challenges in the AI era Flex OCP ORv3-inspired liquid-cooled systems are designed to support the most demanding artificial intelligence (AI)

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Breaking Through Computing Power Limits: A Complete

This article provides an in-depth analysis of how, under extreme 400W heat density, the perfect synergy between high-performance server optical

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Liquid-Cooled Optical Transceivers for 800G/1.6T

Liquid-cooled optical modules are particularly well-suited for high-power consumption scenarios such as AI/GPU clusters, supercomputing centers,

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What is Liquid-Cooled Optical Module?

At present, these optical modules are mainly used in data centers to solve the heat dissipation problem of high-power computing power clusters. In

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OCP OAI S L COOLING

OAI/OAM-based systems are obviously one of the most challenging scenarios from thermal/mechanical design perspective, due to the high module power and dense component layout.

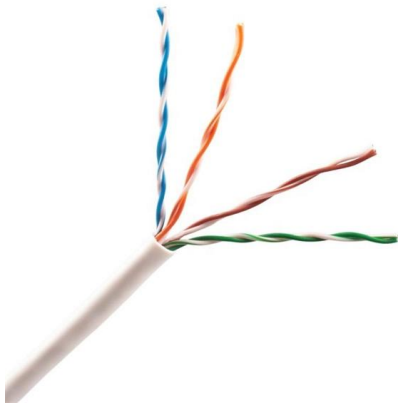
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FiberMall Launches Liquid-Cooled Optical Modules and

Full Speed Coverage: A Breakthrough in Performance and Sustainability The liquid-cooled optical modules and AOC series boast the

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LIQUID COOLING FOR HIGH-PERFORMANCE COMPUTING

Liquid cooling enables the adoption of high performance technology for critical businesses and essential technologies, like artificial intelligence, autonomous vehicles, cutting-edge medical research, remote

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Thermal Management Solutions Report for I/O Modules

Due to the increasing power demands in optical I/O modules, systems designers and data center architects are now considering the use of liquid cooling for optical I/O

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Arista targets AI data centers with new liquid cooled

Arista Networks this week announced that it has developed a 12.8 Tbps liquid cooled optics module that it says will help address the power and

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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

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Deep Dive into Liquid-Cooled Optical Modules in the NVIDIA

As computing systems shift toward liquid cooling, an often-overlooked component, the optical module, is becoming a key focus. In highly integrated environments like NVIDIA's

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What is Liquid-Cooled Optical Module?

Liquid-cooled optical modules are a powerful thermal management technology utilized in optical systems. The aim is to convert heat in optical

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<https://www.frindel.es>