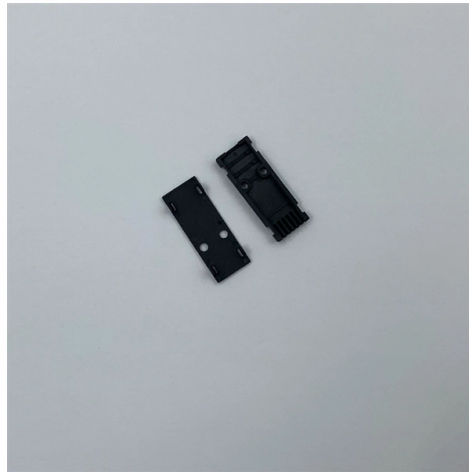


# Liquid-cooled switches LPO for backbone networks



## Overview

LPO modules reduce per-pluggable power from ~30W with DSP-based optics to ~10W, enabling up to 50% system-level savings. Early tests show good receiver performance even under degraded conditions, though transmit paths remain sensitive to reflections and crosstalk at the connector. Imagine a data center where even the most powerful switches run cool and stable— without noise, thermal throttling, or energy waste. Cisco is actively innovating in direct-to-chip liquid cooling for high-performance switches, laying the groundwork for solutions that will enable seamless and. Arista executives discuss liquid-cooled networking gear and support for Linear Pluggable Optics to achieve power and cost optimization for AI data centers. Arista Networks shared some of its plans to deliver liquid-cooled switches and racks that can significantly reduce power consumption in. 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. The two types of liquid cooling used on a large scale in the data center field are cold-plate and submerged liquid cooling.

## Article Content

### Iceotope, Mellanox Plunge HPC Switches Into Liquid Cooling

Cooling specialist Iceotope, in partnership with Mellanox, announced a total liquid-cooled InfiniBand- and Ethernet-based network and interconnect switch targeted at high-performance

Exploring the Future of AI Networking: Liquid-Cooled Switches on the ...

Cisco is actively innovating in direct-to-chip liquid cooling for high-performance switches, laying the groundwork for solutions that will enable seamless and scalable AI at unprecedented

### Ruijie Networks Released Near-packaged Optics (NPO) & Cold-plate Liquid ...

At the summit, Ruijie Networks officially launched the 25.6T silicon photonics NPO cold-plate liquid-cooling switch, meeting the requirements of data centers and operators' networks for high reliability.

Redefining liquid cooling from the server to the switch

BT kicked off the trials with a network switch cooled using Iceotope's Precision Liquid Cooling technology and Juniper Networks QFX Series Switches. With 90% of its

### 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

### Alpha : Unveils 1.6T Liquid-Cooled Switch at COMPUTEX 2025

Alpha Networks Inc. (TWSE: 3380), a leading provider of networking solutions, is set to showcase its latest innovations at COMPUTEX 2025, including its debut of the 1.6T liquid-cooled

### Ruijie Networks Released Near-packaged Optics (NPO) & Cold-plate Liquid ...

At the optical fiber communication conference and exhibit (OFC) 2022, Ruijie Networks released 51.2T silicon photonics NPO cold-plate liquid-cooling switch based on the 800G NPO

Redefining liquid cooling from the server to the switch

Liquid cooling, and precision liquid cooling in particular, is at the forefront of this journey. Whether it's reducing the environmental footprint of data centres,

### Alpha Networks Launches 1.6T Liquid-Cooled Switch

Alpha Networks Inc. announced the launch of its newly developed 1.6T liquid-cooled switch equipped with the Broadcom Tomahawk 6 chip to deliver up to 102.4 Tbps

## Arista Innovations: Harnessing Liquid Cooling and Optical Technology

Arista Networks has recently announced plans to implement liquid-cooled switches and racks designed to significantly reduce power consumption in enterprise AI networks.

## Deep Dive: Liquid-Cooled AI Switches for the Next Generation

This article delves into the design difficulties and solutions for liquid-cooled switches, while also exploring the potential of liquid cooling technology in promoting innovation of network devices.

## STORDIS and Edgecore Networks Lead the Way in AI-Optimized

With advanced cooling innovations, this high-performance switch is purpose-built to meet the growing demands of AI-driven data centers and hyperscale infrastructures.

## Why Can Silicon Photonics and Liquid Cooling Lead the Direction of

As of now, Ruijie Networks has officially released multiple switches that use both silicon photonics technology and liquid cooling technology. Among them, the 51.2 Tbps silicon photonics NPO cold

## Exploring the Future of AI Networking: Liquid-Cooled Switches ...

Exploring the Future of AI Networking: Liquid-Cooled Switches on the Horizon Imagine a data center where even the most powerful switches run cool and stable— without noise, thermal throttling, or

## Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.activa.net.pl>

Email: [sales@activa.net.pl](mailto:sales@activa.net.pl)

Phone: +48 662 748 193

Address: ul. Cybernetyki 7B, 02-677 Warsaw, Poland

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