

# OCS pure optical switch



## Overview

Enable new AI architectures with the Optical Circuit Switch (OCS) The OCS optimizes data center networks by minimizing electrical switches and optical-electrical-optical (OEO) conversions, resulting in significant cost savings, reduced power consumption, and improved latency for. Enable new AI architectures with the Optical Circuit Switch (OCS) The OCS optimizes data center networks by minimizing electrical switches and optical-electrical-optical (OEO) conversions, resulting in significant cost savings, reduced power consumption, and improved latency for. Enable new AI architectures with the Optical Circuit Switch (OCS) The OCS optimizes data center networks by minimizing electrical switches and optical-electrical-optical (OEO) conversions, resulting in significant cost savings, reduced power consumption, and improved latency for GPU connections. OCS is a switching technique used in optical networks to establish and manage light paths between nodes. This direct manipulation of light. This 4Q25 report is a continuation of and update to Cignal AI's previous OCS reports. Since the report's last publication in January 2025, and the webinar Optical Circuit Switching for AI Scaling and Datacenter Automation in July 2025, the OCS forecast has been updated based on newer information. The High-Radix Optical Circuit Switch Platform from Molex uses micro-electro-mechanical mirrors to establish optical paths between fibers, avoiding optical-electrical-optical conversion. The result is a reconfigurable fabric that reduces complexity and power consumption while supporting. Optical Circuit Switching (OCS) has emerged as a critical technology for next-generation Artificial Intelligence (AI) and hyperscale data-center networks.

## Article Content

### OCS Optical Circuit Switch for AI & Data Centers

At its core, It operates as a fully optical, non-blocking circuit switching system. Instead of processing traffic electronically, it establishes direct

### Highly Customized Optical Networking Critical for

Google's system leverages optical circuit switching (OCS) to create direct, low-latency optical paths between TPU chips, minimizing signal

### Polatis optical circuit switching

The POLATIS range is equipped with our patented DirectLight™ technology, making it the only optical circuit switch that can hold dark fiber connections,

### Lumentum Joins Nasdaq-100 as AI Optical Interconnect Era Begins

Optical interconnect technologies, such as co-packaged optics (CPO), silicon photonic switches, and optical circuit switching (OCS), use light signals instead of electrical ones. This makes

### Open Compute Project launches Optical Circuit

The Open Compute Project Foundation (OCP) has announced the formation of a new Optical Circuit Switching (OCS) subproject.

### AI Data Center Interconnect 2026: CPO, Optical Interconnect and ...

Explore AI data center interconnect trends in 2026, including CPO, optical interconnect, OCS, and the real challenges slowing large-scale deployment.

### iPronics Unveils World's First Silicon Photonics Optical

iPronics, a leader in software-defined photonics, today launched its Optical Networking Engine, ONE-32, the world's first Optical Circuit Switch

### Optical Circuit Switch (OCS) Guide for AI Data Center | FiberMall

This guide explains what an optical circuit switch is, how 3D MEMS and cascaded matrix architectures differ, why hyperscalers and AI operators are deploying OCS at the heart of their

### FinancialContent

Lumentum Holdings Inc. ("Lumentum"), a global leader in optical and photonic solutions for the cloud and networking markets, announced today that its R300 optical circuit switch (OCS)

### Molex Accelerates AI Cluster Deployment with One-Stop Optical ...

Molex unveils a full optical stack including serviceable CPO solution, detachable fiberto-chip interfaces and a High Radix Optical Circuit Switch platform to accelerate AI cluster

MEMS-based optical circuit switches key to Google's

Optical circuit switches (OCS) that use mirrors mounted on micro-electro mechanical systems (MEMS) have helped Google scale its network capacity by

All-Optical Circuit Switching for Scalable Data Centers

Coherent Corp. has just introduced a new optical circuit switch (OCS) based on the company's field-proven and ultrareliable Datacenter Lightwave

Google TPU v8 Deep Dive: Precise Calculation of Optical, Copper,

Unlike traditional optical packet switches, OCS does not route every packet; instead, it establishes a persistent optical path connection. This brings the advantages of zero latency and zero power

MLQ.ai | AI for investors

Optical Circuit Switches: The Next Inflection Optical circuit switches (OCS) allow data center operators to dynamically reconfigure optical connections between racks and clusters without electrical

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

Marvell is especially well hedged because it spans both the current DSP-heavy pluggable phase and the later scale-up photonics phase, including optical DSPs, coherent-lite, and

If you invest in photonics, please read this. I spent this weekend ...

Gaetano (@crux\_capital\_). 198 likes 17 replies. If you invest in photonics, please read this. I spent this weekend researching the OCS supply chain. Quick lesson: > OCS = Optical Circuit

iPronics Rolls Out World's First Silicon Photonics

iPronics, a leader in software-defined photonics, has launched its Optical Networking Engine, ONE-32, the world's first Optical Circuit Switch

Lumentum Announces R64 Optical Circuit Switch for AI Data Centers

Key Advantages of the R64 OCS Low Power Consumption: At less than 150 W for a switch capable of carrying over 100Tbps of optical traffic, the R64 changes how an AI data center

The Optical Circuit Switching Market

The Optical Circuit Switching Market – 4Q25 In this update to our OCS report we cover more vendors and technologies, investigate additional

High-Radix Optical Circuit Switch (OCS) Platform | Molex

The High-Radix Optical Circuit Switch Platform from Molex uses micro-electro-mechanical mirrors to establish optical paths between fibers, avoiding optical

Optical Circuit Switches

Lumentum's optical circuit switches (OCS) enable the next generation of AI and cloud network architectures by replacing traditional electrical fabrics with

Optical Circuit Switch

Networking Optical Circuit Switch Enable new AI architectures with the Optical Circuit Switch (OCS) The OCS optimizes data center networks by minimizing

Optical Communications Giant Lumentum Posts Strong Results but

However, CEO Hurlston made it clear that growth engines CPO (Co-Packaged Optics) and OCS (Optical Circuit Switches) are driving long-term variables, stating that "these components

\$MS \$LITE \$COHR \$CIEN EXECUTIVE SUMMARY Morgan

Against this baseline, the report layers in approximately \$23bn of “new” optical opportunities by 2028 and beyond, segmented into 5 markets with approximate 2028 TAMs as

\$SILEX, the TSMC of the MEMS world, just IPO'd on Nasdaq

The Silex IPO confirms that the market will pay a significant premium for a qualified, scarce, hard-to-replicate position in the OCS supply chain. P4O's argument is that it holds exactly

What is OCS (Optical Circuit Switching)?

Optical Circuit Switching (OCS) is a cutting-edge technology that optimizes optical networks by dynamically reconfiguring light paths. Learn about

\$LITE EXECUTIVE OVERVIEW The OFC 2026 briefing materially

The market may be correct that optics eventually moves inside the rack at 400G/lane and beyond. But the timing, attach rates, package standards, and vendor profit pools are still too fluid to

OPTICAL CIRCUIT SWITCHING FOR AI AND

Optical Circuit Switching (OCS) introduces a new approach to resiliency by making the physical network itself programmable. Instead of treating cable and optical paths as static infrastructure, OCS enables

## Contact Us

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

Website: <https://www.kwsaevents.co.za>

Email: [sales@kwsaevents.co.za](mailto:sales@kwsaevents.co.za)

Phone: +27 21 852 4719

Address: 25 Riebeek Street, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

