



Adam Tas Corridor Energy

Latest Developments in CPO Optical Modules





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. Even as SerDes speeds increase, copper-based links struggle to deliver the required bandwidth per watt, once equalization and retiming overheads are factored in. Third, distance itself has become a problem: latency, energy per bit, and signal integrity degrade sharply with electrical reach. Silicon photonics (SiPh) offers a high degree of integration and cost-effectiveness, helping to enhance optical module performance while driving down costs. Coherent technology facilitates long-distance, high-speed transmission with exceptional signal quality. Co-packaged optics (CPO) technology, a key enabler for next-generation data center architectures, promises unprecedented bandwidth density and power efficiency by tightly integrating optical engines with switch silicon.



Latest Developments in CPO Optical Modules

Where co-packaged optics (CPO) technology stands in

Find out CPO's 2025 scorecard and what lies ahead for this optical interconnect technology in 2026 and beyond.



Co-Packaged Optics (CPO) Co-Packaged Optics (CPO)

Traditional pluggable optical modules are increasingly constrained by signal loss, power consumption, and latency because they require long electrical traces



Next-Gen Optics Need Next-Gen Materials: CPO

As data centers continue to evolve, Co-Packaged Optics (CPO) technology is gradually replacing traditional pluggable optical modules, emerging



Samsung Electro-Mechanics and LG Innotek Step Up CPO

Rising demand for CPO in AI data centers is expected to drive development across the



semiconductor supply chain. TrendForce forecasts that CPOs will steadily increase their share of



Silicon photonics and co-packaged optics at the heart of

While linear-drive pluggable modules remain competitive, CPO is expected to offer unmatched customization and scalability, with large-scale



Co-Packaged Optics -- a deep dive , APNIC Blog

From Jensen Huang showcasing CPO switches at GTC 2025 to a wide range of vendors demonstrating optical engines integrated inside ASIC



CPO Switch: Next-Generation Integrated Optical

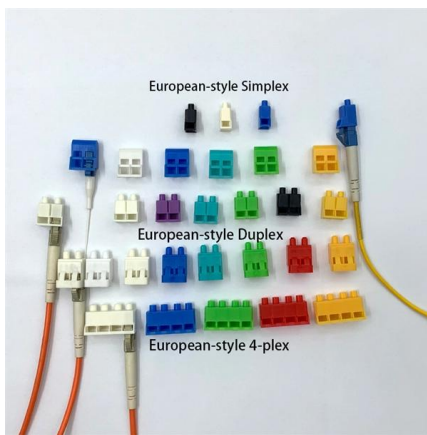
CPO switches shorten the electrical signal path, reduce power consumption, and decrease the number of pluggable modules by co-packaging optical modules with





NVIDIA & Broadcom CPO, HBM4 & LPDDR6, TSMC Active LSI,

Optical Networking Several papers from major optics vendors tackled optical interconnects that will carry data between next-generation AI accelerators both within and between



FormFactor and MPI vie to break SiPh test bottleneck as ficonTEC

The testing process for SiPh chips reportedly spans four main phases from wafer level to module packaging: photonic integrated circuit (PIC) testing, wafer-level optoelectronic integration

Samsung Foundry Reportedly Wins Optical Module Order,

As a result, optical transmission technologies are becoming increasingly important. TrendForce forecasts that co-packaged optics (CPO) will steadily increase their share of optical



Optical Transceiver Market Size, Share, and Trends Analysis 2032

The global Optical Transceiver market size was estimated at USD 13.08 Billion in 2024 and is estimated to grow at a CAGR of 15.41% from 2025 to 2032.



Development Trends in Optical Module Technology:

Check the latest developments in optical module technology, focusing on key advancements such as SiPh, Coherent Technology, LPO, LRO, and CPO.



The Rise of Co-Packaged Optics: A Deep Dive into CPO

A CPO optical module integrates optical and electronic components to boost data center speed, efficiency, and bandwidth while reducing power use.

CPO Emerges as the New Sought-After as JCET

On January 21, JCET announced a major breakthrough in its co-packaged optics (Co-Packaged Optics, CPO) technology development. Silicon





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.

(PDF) Progress in Research on Co-Packaged Optics

In the 5G era, the demand for high-bandwidth computing, transmission, and storage has led to the development of optoelectronic



GlobalFoundries accelerates adoption of co-packaged optics for

SCALE CPO solution is the industry's first OCI MSA capable platform and built with GF's proven silicon photonics technology MALTA, N.Y., May 4, 2026 - GlobalFoundries (Nasdaq: GFS)

LightCounting :: Scale-up networks in AI Clusters is a

A surge in AI development created a new wave in demand for optical connectivity in 2023-2025 and it will sustain the market's growth through 2030. The Figure below



GlobalFoundries' Unveils Optical Module Solution Targeting CPO

The SCALE CPO solution uses both coarse and dense wavelength-division multiplexing (CWDM and DWDM) for bi-directional data transmission over each optical fiber, delivering significant



The Rise of Co-Packaged Optics: A Deep Dive into CPO

This article provides a comprehensive overview of CPO optical modules, exploring their technology, benefits, challenges, and the pivotal role



Coherent Demonstrates Multiple Technologies for Co

Coherent announced it will demonstrate multiple co-packaged optics (CPO) technologies at OFC 2026 in Los Angeles.



Nvidia's \$4B Photonics Venture: What You Need to Know

Nvidia's \$4 billion investment in optical component suppliers Lumentum and Coherent marks the AI hardware linchpin's commitment to optical

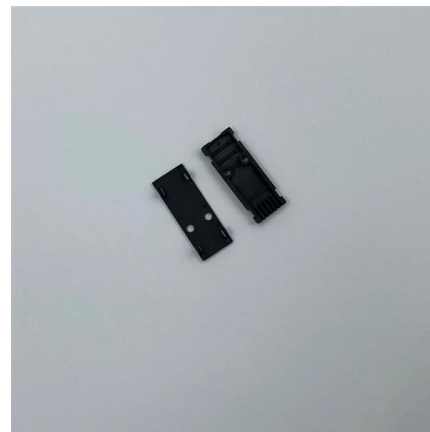


Five Key Trends of Co-Packaged Optics (CPO) in 2026

Unlike pluggable optics, CPO does not yet benefit from a fully established, interoperable ecosystem; mechanical interfaces, thermal

Five Key Trends of Co-Packaged Optics (CPO) in 2026

Meeting market expectations and building confidence in co-packaged optics will require more than performance demonstrations. CPO adoption



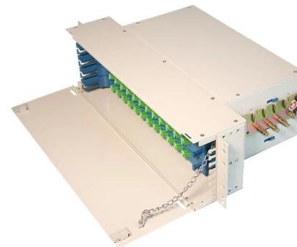
Development trend of optical

In switch network scenarios, the focus of chip-to-chip optical interconnects is on Co-Packaged Optics (CPO) technology, aiming to replace pluggable optical modules.



Global Co-Packaged Optics Market Report 2023-2028: Driven by the

This report examines the latest developments in connectivity, lasers, and cooling systems for CPO as well as showing how CPO modules will be used in four kinds of data center.



Development Trends in Optical Module Technology:

Though CPO development is still in its infancy and industry standards are yet to be fully established, its mature application could bring significant

Co-Packaged Optics Race: Strategic Approaches from NVIDIA and

Co-packaged optics (CPO) is gaining significant attention as the next architecture for next-generation switching. The shift toward co-packaged optics is also reshaping competitive





Coherent Demonstrates Multiple Technologies for Co

These demonstrations highlight Coherent's ability to support multiple optical architectures for co-packaged optics, leveraging its expertise across key

Where co-packaged optics (CPO) technology stands in

Co-packaged optics (CPO) technology, a key enabler for next-generation data center architectures, promises unprecedented bandwidth density



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