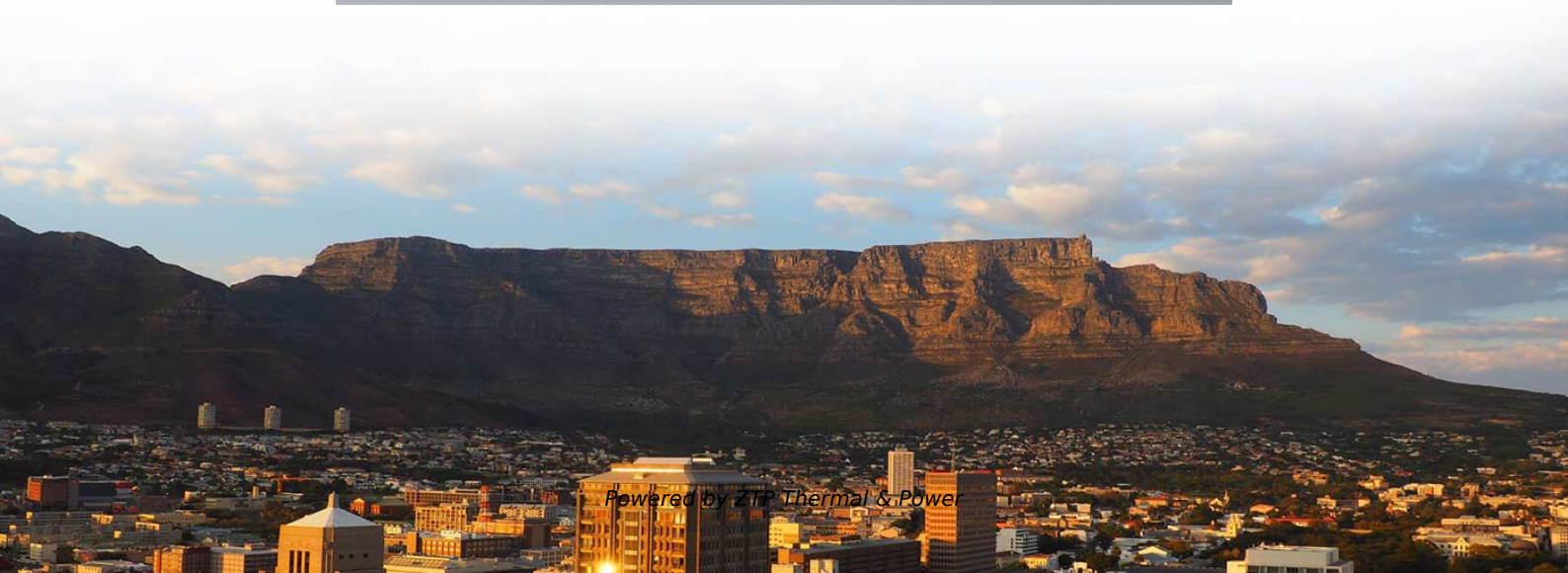
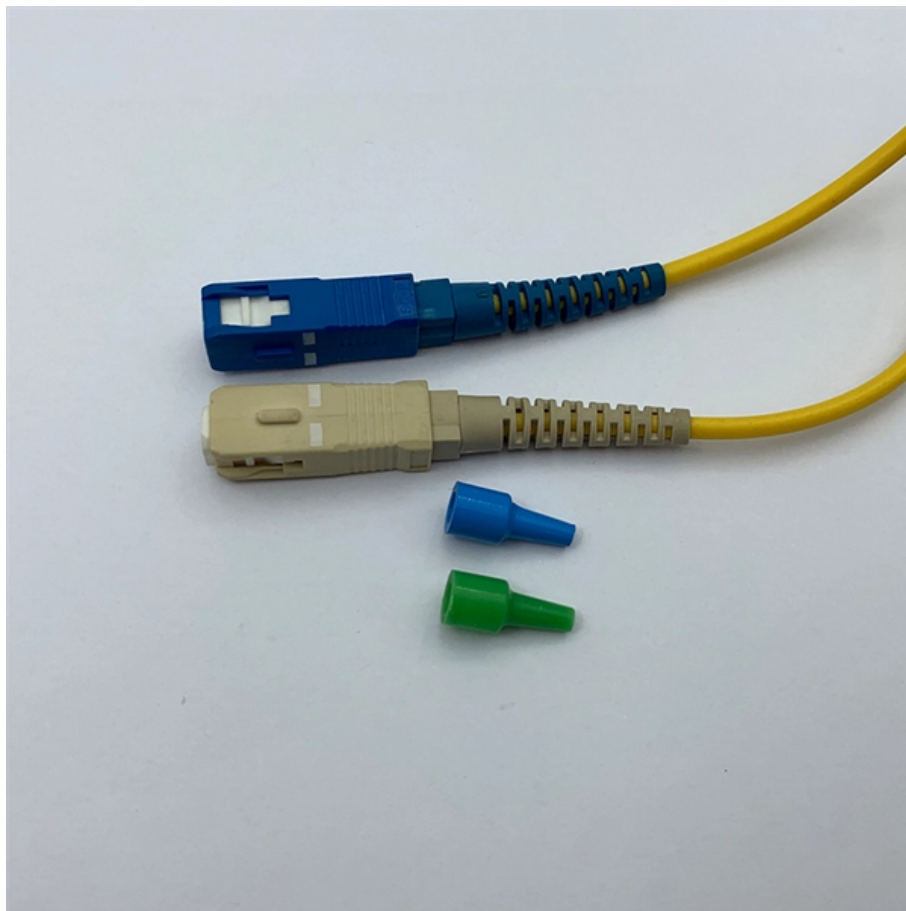


Is there still hope for CPO optical modules





Overview

Small amounts of CPO may start to appear in 2026, but real deployment at scale looks more likely to arrive in 2027/8 or later. 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. As AI clusters push beyond 100 Tb/s per node, the gap between what silicon can generate and what traditional copper interconnects can deliver is widening fast. 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. However, it's worth noting that Andy Bechtolsheim, co-founder of Arista and a long-standing visionary in data centre. In recent years, optical transceiver technology has been steadily shifting toward placing the optics closer to the Application-Specific Integrated Circuit (ASIC).



Is there still hope for CPO optical modules

Co-Packaged Optics (CPO) Insights: Market Outlook

IDTechEx's latest report, Co-Packaged Optics 2025-2035: Technologies, Market, and Forecasts, explores advancements in CPO

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Co-packaged optics (CPO): status, challenges, and solutions

Co-packaged optics (CPO) is a disruptive approach to increasing the interconnecting bandwidth density and energy efficiency by dramatically shortening the electrical link length through advanced

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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

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

Many CPO implementations today still rely on the precision placement of fibre arrays and then securing them with epoxy. Moving forward, expect to see

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Co-Packaged Optics: Market and Technology Update

CPO has undeniable benefits, but there are also still a number of open issues that could keep it out of mass production for years, especially in

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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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Co-Packaged Optics - End of Pluggables? What It Is,

Co-Packaged Optics is no longer a theoretical concept, but its future is still unfolding. While early demos and prototypes are promising, the road to

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Tutorial: The Emergence of Co-Packaged Optics

The next evolution was the concept of "co-packaged optics," where the optical module is



integrated directly onto the same substrate as the switch

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Co-packaged optics (CPO): status, challenges, and

Co-packaged optics (CPO) is a disruptive approach to increasing the interconnecting bandwidth density and energy efficiency by dramatically

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The Rise of Co-Packaged Optics

In this scenario, Co-Packaged Optics (CPO) is now gaining momentum, emerging mainly as an alternative to the pluggable optical modules

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

While the underlying technologies are advancing rapidly, key ecosystem elements--including standardized optical interfaces, reusable IP

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An Introduction To CPO Technology

Figure 1 CPO Co-Packaging In today's conventional packaging, chips and optical modules are packaged separately and then interconnected externally, which

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Traction of embedded optical modules highlighted in

Embedded or integrated semiconductor optical modules are starting to gain traction, with the shipments of On-Board Optics (OBO), Near-Packaged

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CPO vs LPO: Choosing the Right Path for Next-Gen

CPO vs LPO: Compare key differences, benefits, power savings, and best use cases for data centers to choose the right optical technology for your

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CPO modules worth US\$5.5bn by 2027 - report

Industry analyst firm CIR, predicts that the co-packaged optics modules market will reach US\$5.5 billion in 2027, including NPO products, in its

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Where co-packaged optics (CPO) technology stands in 2026

Find out CPO's 2025 scorecard and what lies ahead for this optical interconnect



technology in 2026 and beyond.

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

Central to the report is the recognition of advanced semiconductor packaging (2.5D & 3D) as the cornerstone of co-packaged optics technology. IDTechEx places

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The Rise of Co-Packaged Optics (CPO): Revolutionizing High-Speed

These models demand ultra-fast interconnects, where traditional optical transceivers face significant limitations. As AI models grow in

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Co-packaged optics (CPO): status, challenges, and solutions

Although there are still many difficulties, new techniques and innovations will constantly push the limit. Therefore, MZM-based transmitter for co-packaged optics (CPO) is a promising solution to replacing

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Embedded Optical Modules Set for Explosive Growth

Source: Counterpoint Research Silicon Photonics (SiPh) and Co-Packaged Optics (CPO) Report In essence, the embedded optical modules market is on the cusp

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The Rise of Co-Packaged Optics (CPO): How It Redefines Data

Co-Packaged Optics (CPO) has emerged as a revolutionary architecture that tightly integrates optics with switch ASICs, providing a pathway to terabit-scale networking while reducing



What is Co-Packaged Optics? , CPO Technology is the

The optical-to-electrical conversion that is performed by the optical transceiver is still needed in a CPO system, but it moves from a pluggable

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Co-packaged optics deployments will start in 2026, says

"There are positive signs for CPO deployment by 2026, but large-scale deployments will require investment by motivated industry actors like

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Embedded Optical Modules Expected to Grow 50% CAGR by



2033

The embedded optical module market is about to explode. Recent forecasts point to a 50% compound annual growth rate (CAGR) through 2033--one of the fastest in the tech world right

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Lpo Vs Cpo: Which Optical Module Packaging Will

CPO (Co-Packaged Optics) instead places optical engines (or silicon photonics) adjacent to or inside the switch ASIC/package, collapsing long electrical traces

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Embedded Optical Transmission Tech, Arrival of CPO Set to Deliver

Shipments of embedded optical modules are set to grow at a CAGR of 50% through 2033. Of the various types of I/O solutions -- OBO, NPO and CPO -- the latter will bring the biggest generational



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.

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Co-Packaged Optics: Market and Technology Update

Large-scale CPO deployment is still 3-5 years away, although initial commercial trials may commence in 2026. The technology required to support

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LPO vs CPO: Which Will Dominate the Data Center



In the rapidly evolving landscape of data center optical interconnects, the competition between LPO (Laser Phased-locked Oscillator) and CPO

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