

Future Demand for Optical Module CPOs



Overview

According to IDTechEx, the Co-Packaged Optics (CPO) market is projected to exceed US\$20 billion by 2036, growing at a robust CAGR of 37% from 2026 to 2036. CPO network switches are expected to dominate revenue generation, driven by each switch potentially incorporating up to 100 Tb/s per node. That playbook is no longer holding for today's AI systems. 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. Three hurdles are now colliding: First, power delivery is nearing practical. Co-Packaged Optics (CPO) is an advanced optical interconnect architecture that integrates optical components—such as photonic integrated circuits (PICs) and lasers—directly alongside switching ASICs or processors within the same package. This approach significantly reduces electrical I/O distance. Co-Packaged Optics (CPO) Market (By Component: Optical engines/transceivers, Photonic integrated circuits, Lasers, Modulators, Electrical ICs / SerDes, Optical fibers and waveguides, Connectors and interfaces, Thermal management solutions, Packaging substrates and interposers, Testing and alignment. Yole Group unveils its latest photonic market and technology analyses, Silicon Photonics 2025 and Co-Packaged Optics for Data Centers 2025, which explore how AI-driven demand is reshaping connectivity, from transceivers to packaging innovation. But after nearly a decade of existence, where does this next-generation optical. Co-Packaged Optics Module (CPO) by Application (Ethernet Switches, Machine Learning, Other), by Types (100G, 400G, Other), by North America (United States, Canada, Mexico), by South America (Brazil, Argentina, Rest of South America), by Europe (United Kingdom, Germany, France, Italy, Spain, Russia.

Article Content

Jul 07, 2025

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

These pressures are driving renewed momentum behind co-packaged optics (CPO). According to LightCounting, sales of lasers and photonic integrated

May 08, 2026

Co-Packaged Optics Module (CPO) Trends and Forecasts:

The Co-Packaged Optics (CPO) module market is projected for substantial growth, driven by escalating demands for enhanced bandwidth and reduced latency in data centers and high

Oct 31, 2025

Co-packaged optics are inching closer to

The optical interconnect industry is growing fast, and many factors affect its success as well as delays in deployment. (U)HD video streaming Shortage of Cloud services semiconductor devices Epi Foundry

Jul 14, 2025

Co-Packaged Optics (CPOs)

The optical engine of a transceiver—whether co-packaged or part of a pluggable module—typically includes an electronic integrated circuit (EIC) and

Aug 13, 2025

Understanding Optics Module Trends and Growth Dynamics

The optics module market is booming, projected to reach \$42 billion by 2033, driven by 5G, cloud computing, and data center expansion. Learn about key market trends, leading companies, and

Mar 19, 2026

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

Dec 18, 2025

Co-Packaged Optics (CPO) 2025-2035: Technologies,

Co-Packaged Optics (CPO) presents a promising solution to these challenges. Unlike traditional pluggable models, CPO integrates optical modules directly onto

Sep 06, 2025

Tutorial: The Emergence of Co-Packaged Optics

CPOs promise to deliver a five-fold increase in bandwidth compared to traditional pluggable optical connections. However, this new approach requires a significant

Jan 18, 2026

Optical Modules Market Size, Growth Trends & Forecast

Optical Modules Market Future Outlook & Investment Strategies Over the next five years, the Optical Modules Market is poised for sustained growth,

Mar 01, 2026

Co-Packaged Optics Module (CPO)

The global market for Co-Packaged Optics Module (CPO) was estimated to be worth US\$ 44.6 million in 2024 and is forecast to a readjusted size of US\$ 1236 million by 2031 with a CAGR of

Mar 16, 2026

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

Therefore, the MRR-based transceiver array for co-packaged optics (CPO) is a promising solution to replacing the existing implementation of

Sep 30, 2025

High-Speed Optical Module Demand Soars: AI

Discovering the intersection of AI computing and escalating market trends, the reliance on optical modules has surged. From high-scale

Feb 13, 2026

Co-Packaged Optics (CPO) Market Size to Hit USD

Emerging applications in quantum computing, scientific research, and smart city infrastructure are expected to drive the future demand for co-packaged

Jul 04, 2025

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.

Aug 30, 2025

Co-Packaged Optics Market Size, Growth & Trends, 2031

Co-packaged optics market to grow from USD 161.43M in 2026 to USD 748.62M by 2031, driven by AI/ML bandwidth, hyperscale data centers, and

Dec 29, 2025

Optical Module Market Growth Driven by AI Demand

Optical Module Market surges as AI clusters expand, boosting demand for 800G and Coherent-lite modules and reshaping global cloud network

Nov 14, 2025

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

IDTechEx's "Co-Packaged Optics (CPO) 2026-2036" explores technical innovations and packaging trends, analyzing the value chain. It evaluates industry players

May 01, 2026

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

Jul 18, 2025

Optical Module Package Market 2025

South America In South America, the Optical Module Package market is in a nascent growth phase, with Brazil leading in telecommunication infrastructure upgrades. Demand is concentrated in urban

Feb 12, 2026

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.

May 08, 2026

Optical Module Chip Market 2025

The optical module chip market exhibits a fragmented yet competitive structure with global technology providers, semiconductor manufacturers, and specialized optical communication companies vying for

Apr 23, 2026

CO-Packaged Optic Market Outlook With Key Market Drivers

Edge computing infrastructure requirements are driving demand for CPO solutions capable of supporting 400G and 800G optical links in space-constrained environments.

Jan 24, 2026

Powering the future of data centres — Co-Packaged Optics

Powering the future of data centres — Co-Packaged Optics Responding to my previous post on how Linear-Drive Pluggable Optics (LPO) and Linear Receiver Optics (LRO) can reduce

Feb 10, 2026

Co-Packaged Optics — a deep dive | APNIC Blog

Guest post: Why CPOs? Why not LPOs? OFC 2025 made one thing clear: The transition to Co-Packaged Optics (CPO) switches in data centres is

Jul 18, 2025

LPO vs. CPO: Which Data Center Optical Interconnect

Conclusion While Linear-drive Pluggable Optics (LPO) and Co-Packaged Optics (CPO) are emerging as future trends in data center interconnect

Jun 27, 2025

Co-Packaged Optics (CPO) Market Outlook

Co-Packaged Optics (CPO) presents a promising solution to these challenges. Unlike traditional pluggable modules, CPO integrates optical modules

Apr 25, 2026

Co-Packaged Optics (CPO) Market Trends 2026: AI Data Center

Explore the future of co-packaged optics (CPO) in AI data centers. Learn how silicon photonics, optical I/O, and high-speed optical interconnect technologies are shaping next-generation

Feb 14, 2026

Co-Packaged Optics: Market and Technology Update

This report dives deeper into CPO for insight on the technology and applications, the benefits and issues, its impact on pluggable optics, and Signal

Apr 11, 2026

What is Co-packaged Optics?

Co-packaged optics is an approach that aims to address growing challenges around bandwidth density, communication latency, copper reach, and

Jan 23, 2026

Global Co-Packaged Optics Module (CPO) Market Research Report

The Co-Packaged Optics Module (CPO) market size, estimations, and forecasts are provided in terms of and revenue (\$ millions), considering 2024 as the base year, with history and forecast data for the

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