

Co-packaged Optics Industry



AI Overview

The co-packaged optics industry is rapidly growing, driven by AI data centers, hyperscale cloud expansion, and the need for energy-efficient, high-bandwidth interconnects.

Market Size and Growth The global CPO market is experiencing significant expansion. Estimates for 2026 place the market at USD 1.55 billion, with projections reaching USD 4.12 billion by 2034, reflecting a CAGR of 11.2% . Other analyses suggest even higher growth rates, with the market expected to reach USD 764.32 million by 2031 at a CAGR of 35.92% from 2026 to 2031 . This growth is fueled by the increasing demand for high-speed, low-power interconnects in hyperscale data centers, AI/ML clusters, and telecommunications infrastructure .

Technological Drivers CPO integrates optical transceivers directly with electronic driver ASICs within a single package, eliminating traditional electrical-optical interfaces. This co-packaging reduces power consumption, improves signal integrity, and enables higher lane counts, such as 400 Gbps and beyond, which are critical for next-generation data centers . By placing optical engines adjacent to switch ASICs or XPUs, CPO reduces electrical distances from inches to millimeters, lowering latency and power per bit transmitted, with potential reductions from 30 W to 9 W per link in high-speed networks . Key technological trends include: Adoption of 2.5D and 3D integration and hybrid bonding for dense photonic-electronic integration . Silicon photonics for improved scalability, CMOS compatibility, and cost efficiency . System-level co-optimization (STCO) to evaluate electrical, optical, thermal, and packaging constraints early in design .

Applications CPO is primarily deployed in: Hyperscale cloud data centers (62% market share in 2025) High-performance computing (HPC) and AI/ML clusters Telecommunications and networking Defense and aerospace These applications benefit from higher bandwidth density, lower latency, and reduced power consumption, which are essential for AI workloads requiring massive intercon...

Article Content

Co-Packaged Optics: Architecture, Status, and the Path

An industry consortium founded in 2015 to create specifications for optical modules installed on main boards, as a step between front-panel

Co Packaged Optics (CPO) – Scaling with Light for the Next Wave of ...

Co-Packaged Optics (CPO) has long promised to transform datacenter connectivity, but it has taken a long time for the

What is Co-Packaged Optics (CPO) Technology?

Check out our webinar, Scalable Fiber Solutions for Co-Packaged Optics (CPO) Applications, in which industry experts from Corning and Broadcom explore key

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

Global Co-Packaged Optics Market Research Report 2025

The Co-Packaged Optics 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

Industry insight: photonics to scale AI data centers

From co-packaged optics at the board level to silicon photonics and optical circuit switches at the rack and network levels, photonics enables significant advances in bandwidth,

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

The report is based on extensive research and interviews with industry experts and provides valuable insights for anyone interested in gaining a strategic

Global Co-Packaged Optics Module (CPO) Competitive Landscape ...

Global Co-Packaged Optics Module (CPO) Competitive Landscape Professional Research Report 2026 Market Overview According to DIResearch's in-depth investigation and

OFC 2026 Exhibit Connects the Global Optical Ecosystem Powering

Hundreds of global brands and innovators will showcase the technologies defining AI-era data centers and networks — from co-packaged optics (CPO) and optical I/O for scale-up systems, to advances in

Co Packaged Optics Market Report: Size, Growth,

Co Packaged Optics (CPO) is an innovative optical interconnect technology that incorporates optical components directly onto a silicon chip, thereby improving

Co-Packaged Optics Market Size, Share | Industry Report

Co-packaged optics (CPO) integrate optical engines alongside switch and accelerator silicon in a single package to cut power and boost bandwidth density for AI data-center networking.

Co-Packaged Optics — a deep dive | APNIC Blog

OFC 2025 made one thing clear: The transition to Co-Packaged Optics (CPO) switches in data centres is inevitable, driven primarily by the power

Co-Packaged Optics (CPO) Market Analysis: 1.6T Transition & AI

Strategic analysis of the Co-Packaged Optics (CPO) market, tracking the 2026 inflection point for 1.6T modules. Explores value migration, supply chain bottlenecks, and thermal

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

The UCle optical will redefine where copper is used. Copper remains a local-reach technology, optimized for in-package communication, while optics

Broadcom Showcases Industry-Leading Quality and Reliability of Co ...

Broadcom continues to collaborate with ecosystem partners to drive CPO adoption and interoperability across the industry. "This milestone reinforces the long-term vision for co-packaged

Co-packaged Optics

The co-packaged optics market, therefore, benefits from a closed loop that links chip design to captive consumption, reinforcing the region's share even as production diversifies globally.

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

Coherent to Unveil Breakthrough AI-Scale Optical Innovations and ...

Coherent will unveil AI-scale optical innovations at OFC 2026, showcasing technologies that advance bandwidth, scalability, and energy efficiency.

Co-Packaged Optics Market Size, Share and Growth

However, increased network complexity is likely to pose challenges for industry players. The objective of the report is to define, describe, and forecast the co

Optical Interconnect Technology Analysis: LPO, NPO,

Exploring optical interconnects for AI data centers: LPO for low-power, short-distance links, NPO for high-density, near-package connections,

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

The global co-packaged optics (CPO) market size is evaluated at USD 95.04 million in 2025 and is predicted to hit around USD 1,055.11 million by

Co-Packaged Optics (CPO) Market Size to Hit USD 1,055.11 Million

The co-packaged optics (CPO) market refers to the ecosystem of technologies, components, and solutions where optical transceivers and photonic elements are integrated within

Co-Packaged Optics: Technical Barriers and the Road to Mass

Co-Packaged Optics: Technical Barriers and the Road to Mass Production
Swissphotonics Lunch Chat October 14th, 2025 Emma Xu

Yole Group

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Co-Packaged Optics Market Size, Share & Growth,

Co-Packaged Optics (CPO) Market Size was valued at \$91.27 million in 2025 and is expected to grow at 35.70% CAGR to reach \$1,923.64

Co-Packaged Optics Industry Players

Co-Packaged Optics industry insights on factors that are driving the growth of the Co-Packaged Optics Market and key players along with their go to market strategies and new revenue

Optics & Photonics News

Ayar Labs' co-packaged optics technology. [Image: Ayar Labs] Silicon Valley-based optical-interconnect solutions provider Ayar Labs

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