

Procurement of 800G Co-packaged Photonics



Overview

By 2025, operators moved past 400G, with 800G becoming the mainstream, and early pilots pushing into 1. In early 2024, primary North American markets showed only 2. What is the difference between 1. 6T and 800G silicon photonics optical modules?

The types of chips are not significantly different. Basic electronic chips in a module, such as DSPs and drivers for the transmitter, and TIAs for the receiver, are essential for 400G, 800G, or silicon/non-silicon. STMicroelectronics just entered high-volume production of its PIC100 silicon photonics platform — the manufacturing technology behind the 800G and 1. For network engineers, this is the plumbing layer beneath your VXLAN EVPN overlays. BOSTON (May 7, 2025) – After explosive growth in 2024, 800G Datacom optics for AI and general computing applications will be the fastest growing segment of the market in 2025, according to the latest Optical Components Report from research firm Signal AI. 6T optics will enter volume production in. 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. 5% from 2026 through 2034, driven by the exponential rise in AI-accelerated data center infrastructure. AI and cloud traffic surged, driving inter-data-center bandwidth purchases up 330% from 2020 to 2024.



Article Content

Optical Modules Market Research Report 2034

Key growth opportunities in the optical modules market through 2034 include co-packaged optics (CPO) for AI networking fabrics with an estimated \$4 billion

Powering the Next Data Race: How 800G & 1.6T

In its latest move, Intel licensed its 800G Silicon Photonics design to Source Photonics, enabling the development of OSFP-form factor 800G

Pluggables, Power, and Geopolitics: Mapping the 800G

Pluggables, Power, and Geopolitics: Mapping the 800G and 1.6T Optical Transceiver Battle How AI Demand Is Reshaping Market Share, Supply

\$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

Silicon Photonics Co-Packaged Optics Market

The silicon photonics co-packaged optics market in 2025 is led by Intel Corporation, which holds an estimated 18.4% market share through its Silicon Photonics

The Global Optical Computing Market 2026-2036

Global optical computing market report 2026-2036. 441 pages covering PICs, photonic AI processors, co-packaged optics, photonic QC & 98 company profiles

AI drives high-speed optics shift as LuxNet, TrueLight

As AI workloads intensify and data centre architectures evolve, optical communications vendors are positioning co-packaged optics (CPO) and

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

Pluggable Optical Module Market Research Report 2034

Broadcom's silicon photonics division is developing integrated photonic solutions that may eventually compete with discrete pluggable modules in ultra-high-density switching applications, representing a

800GbE Optics Shipments to Grow 60% in 2025

The transition to 1.6T Datacom optics begins in 2025, but it will not affect the growth rate of 400/800G technology until 2026. Also, no material

Market Insights: 800G & 1.6T Silicon Photonics Optical

This article answers key questions about 800G and 1.6T silicon photonics optical transceivers, covering chip architecture, packaging differences

Co Packaged Optics (CPO) – Scaling with Light for the

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

Semtech Announces 224Gbps TIAs and MZM Drivers for Optical

Semtech, a leading provider of high-performance semiconductor, Internet of Things (IoT) systems and cloud connectivity service solutions, announced a family of 224Gbps per lane

Silicon photonics and co-packaged optics at the heart of

With AI reshaping data infrastructure, silicon photonics and co-packaged optics represent critical enablers of tomorrow's data center. Yole

Optical Communication Industry Trends 2026: AI, 800G/1.6T Optical ...

Explore optical communication industry trends in 2026, driven by AI infrastructure, 800G and 1.6T optical modules, silicon photonics, and next-generation data center connectivity solutions.

CPO & Silicon Photonics: AI's Interconnect Bottleneck and Who Profits

2026 is the inflection point where co-packaged optics (CPO) moves from concept to volume production. The market routinely conflates two very different paths. One is "optical

\$COHR KEY READ-THROUGHS FROM COHERENT CORP Q3

Coherent also highlighted a path to 3.2T using 400G-per-lane silicon photonics and 400G differential EMLs. Transmission mechanism: Sustained 800G growth alongside rapid 1.6T adoption

STMicro's Silicon Photonics Hits Mass Production: What 800G/1.6T

STMicroelectronics enters high-volume PIC100 silicon photonics production for AI data centers. Here's what 800G/1.6T co-packaged optics mean for fabric design, power budgets, and

Top Silicon Photonics Stocks 2026: Breaking the

Watchlist of silicon photonics stocks: Co-packaged optics replacing electrical I/O to slash latency and power consumption in AI data centers.

MarketsandMarkets

Revenue Impact Firm - MarketsandMarkets offers market research reports and quantified B2B research on 30000 high growth emerging opportunities to over 10000 clients worldwide. Get detailed insights

The Evolution of Optical Modules: 400G → 800G → 1.6T - A Strategic ...

Discover the evolution from 400G to 800G and 1.6T optical modules. Learn key technologies, CPO vs pluggable, and upgrade strategies for future-ready data centers.

Co-Packaged Optics: Architecture, Status, and the Path to 1.6T Switches

A comprehensive technical examination of co-packaged optics (CPO): how electrical bandwidth limits drive integration onto the switch ASIC package, silicon photonics modulator

The Silicon Photonics & Co-Packaged Optics supply chain

Map of 90+ companies in the co-packaged optics supply chain. SOITEC, EV Group, Siverson Photonics, IQE, Sumitomo Electric, Lumentum, Coherent, NVIDIA etc

Optical Transceiver: 400G, 800G, 1.6T and the Leap to

Silicon photonics merges lasers, modulators, and detectors on CMOS wafers, cuts power and size, and enables dense co-packaged engines.

Silicon Photonics Networking for Agentic AI | NVIDIA

NVIDIA co-packaged optics with silicon photonics deliver 5x power efficiency and 10x resiliency, enabling scalable, high-performance networking for agentic AI.

Silicon photonics and co-packaged optics at the heart of

As AI continues to drive exponential demand for bandwidth, the sector is transitioning to higher data rates, with 200G/channel links expected to become

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