

# Next-generation optical module production capacity



## Overview

The global production capacity of 400G optical modules is expected to reach 10 million units by 2024, up from 2. Supply chain disruptions in 2022 caused a 15% delay in delivering high-speed optical modules to data center clients, primarily due to. While the industry-standard OSFP (Octal Small Form-Factor Pluggable) module has successfully enabled 400Gbps, 800Gbps, and 1.8Tbps of switching. China accounts for over 70% of global optical module manufacturing, with Shenzhen and Suzhou as major production hubs. (NYSE: COHR), a global leader in photonics, today announced it will showcase breakthrough innovations powering the next generation of AI-driven datacenter and communications networks at OFC 2026, March 17 -19, at the L. Convention. On one end, high performance optics drives capacity toward 1Tbps per wavelength as the laws of physics approach the maximum channel capacity as defined by the Shannon Limit. Components and systems vendors are developing new innovations that eke out more capacity on fiber, but each innovation comes. 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. This shift is driven by multiple forces: hyperscale data centers require greater east-west bandwidth to support massive internal data.



## Article Content

Broadcom Announces Tomahawk® 6 – Davisson, the Industry's First

The new generation will double per-channel bandwidth to 400 Gbps while achieving greater levels of energy efficiency, further extending Broadcom's leadership in enabling the scale and

Optical Module Industry Statistics 2026

The global production capacity of 400G optical modules is expected to reach 10 million units by 2024, up from 2.3 million units in 2021. Supply chain disruptions in 2022 caused a 15% delay

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.

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

McKinsey Direct Opportunities in networking optics ...

12 Broadcom; Optical transceivers for datacom and telecom 2024, Yole Group, May 2024; "Delta showcases advanced AI data center networking solutions with co-packaged optics (CPO) Ethernet

\$IONQ Has space exposure most space portfolios still file under ...

New scope, his words: networking, sensing, security, plus "space portfolio and capabilities across satellite systems, synthetic aperture radar, and optical communications." One

Hon Hai Technology Group (Foxconn) Announces First Quarter 2026 ...

Regarding recent market focus on co-packaged optics (CPO), rotating CEO Chiang said that CPO switches are scheduled to enter mass production in the third quarter, with annual

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XPO: Redefining Pluggable Optics for AI Networking

This section outlines the five critical requirements that define the next generation of data center optics and examines why existing standards—originally developed for traditional cloud computing

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NVIDIA and Corning Announce Long-Term Partnership to Strengthen

NVIDIA (NASDAQ: NVDA) and Corning Incorporated (NYSE: GLW) today announced a multiyear commercial and technology partnership to dramatically expand U.S.-based manufacturing

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Coherent's OFC materials describe OCS as a new growth engine shipping into production deployments with more than 10 customer engagements, and Marvell demonstrated interoperability

NVIDIA and Coherent Announce Strategic Partnership

NVIDIA and Coherent Corp. (NYSE: COHR) today announced a multiyear strategic agreement to advance the frontier of advanced optics

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Learn how Coherent empowers innovations and breakthrough technologies for the industrial, communications, electronics, and instrumentation markets.

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

Next-Generation Multi-Rail Enhancements New advancements in multi-rail optical transport dramatically increasing fiber capacity and system efficiency (4 rails in 1RU) for scale-across

How 400G Optical Modules Are Shaping Next-Gen Networks

To address these demands, operators are increasingly adopting 400G optical modules—compact, pluggable transceivers capable of delivering up to 400 Gbps per port.

2026 Semiconductor Industry Outlook | Deloitte Insights

As tech and chip majors continue to pursue this new form of vertical integration (referred to as circular financing by some industry analysts), the semiconductor

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Basket of 20 European stocks I like right now (and probably still will ...

Europe has a ton of huge names that won't see any growth over the next decade. In sectors like banking, manufacturing, automotives, pharmaceuticals.....very boring investments.

### Optical Module Technology Roadmap | 800G to 3.2T Evolution

Explore the future of optical module technology from 800G to 1.6T, 3.2T and beyond. Comprehensive roadmap covering silicon photonics, CPO, coherent datacom, and AI-optimized

### Coherent Optics at 400G, 800G, and Beyond

While the first 400ZR modules are shipping commercially in 2H21, work has already started on the next coherent pluggable data rate at 800G. The OIF 800G Coherent project began in December 2020,

### Lumentum

Lumentum Holdings Inc. ("Lumentum"), a global leader in photonic solutions, today announced its showcase of technology and product demonstrations designed to meet the

### Making long-haul large-capacity 400G optical network a reality

In this Review, we describe the key technologies necessary for long-haul large-capacity 400G optical transmission. First, we determine that the quadrature phase-shift keying format is...

### Making long-haul large-capacity 400G optical network a reality

Long-haul large-capacity 400G optical transmission over 1,500 km is possible through advanced fibre-optic systems. This Review provides a holistic view of the signal modulation,

### Silicon photonics and co-packaged optics at the heart of

In addition to the silicon photonics market report, Co-Packaged Optics for Data Centers 2025 examines how packaging innovation is transforming next

## Contact Us

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