

## Optical module concept explodes across the board



### Overview

Embedded optical modules are about to shake up the future of computing. They promise wild growth and performance leaps in data transport and AI processing. This blog digs into how embedded semiconductor solutions—think On-Board Optics (OBO), Near-Packaged Optics (NPO), and Co-Packaged Optics (CPO) solution is the industry's first OCI MSA capable platform and built with GF's proven silicon photonics technology MALTA, N., May 4, 2026 – GlobalFoundries (Nasdaq: GFS) (GF) today announced the introduction of its SCALE™ optical module solution for co-packaged optics (CPO). GF's SCALE. As traditional electrical signal transmission faces bandwidth bottlenecks and energy consumption challenges, optical modules have quietly ushered in a new era of communication with their sophisticated photoelectric conversion technology. 8Tbps of bandwidth using 64 electrical lanes and incorporates an integrated liquid-cooled cold plate capable of supporting 400W+ module

power.

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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 ...



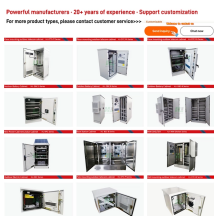
MALTA, N.Y., May 4, 2026 - GlobalFoundries (Nasdaq: GFS) (GF) today announced the introduction of its SCALE™ optical module solution for co-packaged optics (CPO).



Built with GF's advanced silicon photonics technology, the SCALE CPO solution utilizes both coarse and dense wavelength-division multiplexing (CWDM, DWDM) for bi-directional data ...



Scale Across, a concept recently proposed by NVIDIA, refers to long-distance links between data centers and depends entirely on optical fiber, without involving silicon photonics CPU ...



Optical modules are devices used in fiber optic communications to transmit and receive data through optical fibers. They convert electrical signals into optical signals and vice versa, ...



Discovering the intersection of AI computing and escalating market trends, the reliance on optical modules has surged. From high-scale computational scenarios in AI-powered systems to ...



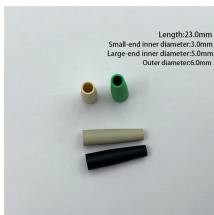
XPO represents a new class of optical pluggable module designed specifically for next-generation AI data center fabrics. Each XPO module delivers 12.8Tbps of bandwidth using 64 electrical lanes and ...



From chip design to packaging and testing, China's optical module industry chain is achieving breakthroughs across the board: Independently developed coherent optical communication ...



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The optical module PCB board market is experiencing robust growth, fueled by the exponential increase in data traffic driven by 5G deployment, cloud computing, and the expanding ...



Marvell becomes a founding member of the XPO MSA, introducing a new liquid-cooled optical module form factor that delivers 12.8 Tbps and 4x bandwidth density for AI data centers.

## Contact Us

For more information, pricing, or custom data center solutions, please contact us:

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