

High-speed interconnect chips and optical modules





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Optical Interconnect Technology Analysis: LPO, NPO, CPO

Its core concept is to place the optical engine and xPU chip (such as a GPU, NPU, or switching chip) side-by-side on the same high-performance PCB

Unveiling The Core Technologies Of Optical Modules: DML Vs. EML

DML or EML - which leads in high-speed optical transmission? This article dives into the core technologies of optical modules, comparing direct modulated lasers (DML) and electro



AI Data Centers Ignite a Laser Shortage Wave; Nvidia's

TrendForces recent research indicates that high-speed optical interconnects are now central to performance and scalability, especially as AI data centers grow into large clusters. The report

2025 Global AI Data Center Interconnect Trends

AI-driven data centers evolve from single-chip to heterogeneous multi-GPU architectures. High-speed optical interconnects enable scalability, while

\$SIVE \$LWLG \$POET The AI infrastructure supply chain is evolving



Why the Siverts + LWLG Combination Matters This is the critical technological pairing: o Siverts provides the continuous laser light to LWLG polymers modulate that light into ultra-high-speed

Optical Modules and PCBs: Driving High-Speed Data Transmission in

In the fast-paced world of data communication, the demand for efficient, high-bandwidth solutions has never been greater. As AI-driven applications and massive data processing push the

Speeding AI Compute, Intel Debuts First Integrated

Intel recently developed an optical chip interconnect system and demonstrated its first fully integrated optical I/O (OCI) chiplet. This chiplet



Optical interconnect chips at low cost

However, high-performance silicon-based photodetectors typically need to integrate other materials with a bandgap narrower than silicon, such as germanium. Such integration is difficult and

>>Supply shortage specialty optical fiber prices spike 10x o Q1

Chinese firms now hold >70% of the global optical module market and >60% of the optical fiber market, and are rapidly expanding their competitive footprint in leading-edge categories

Intel unveils high-speed optical I/O chiplet



The OCI chiplet combines a silicon photonics IC, which includes on-chip lasers and optical amplifiers, with an electrical IC. While the chiplet

Active Optical Cables Break the AI Compute Bottleneck: 100m High-Speed

According to supply-chain sources, leading AI cloud providers are now using AOC as the primary rack-to-rack interconnect in their newest H100/B200 GPU clusters, replacing the previous

OFC 2026 Outlook: AI Data Center Optical Interconnect

Hyperlume's micro-LED optical interconnect technology will be integrated with Credo's end-to-end system-level connectivity solutions, enabling Credo to



High-Speed PCB Solutions for 400G and 800G Optical Modules

This guide explains the key PCB technologies, materials, manufacturing processes, and cost considerations for 400G and 800G optical modules in 2026.

I am long Clearfield, Inc. \$CLFD Here's my thesis: I've been

A major challenge for CPO is that lasers are heat sensitive and fail often if they are buried inside a hot AI chip package The industry is moving toward ELS, placing the lasers at the front of the

Intel® Silicon Photonics



Intel is a pioneer in Silicon Photonics, having started investing in this technology at Intel Labs over 20 years ago. Today, the Intel Silicon Photonics Product Division is the volume market leader in Silicon

Industry insight: photonics to scale AI data centers

Scaling up packages The most cost-efficient way to interconnect multiple chips within a single package is through electronic traces, which allow for high-speed communication over short

Photonics Powers AI Revolution with Light

From strategic investments in silicon photonics to partnerships across the optical ecosystem, NVIDIA is accelerating the shift toward high-speed optical interconnects, including 1.6T optical



Intel says its optical interconnect chiplet technology is a

At the Optical Fiber Communication Conference 2024, Intel demonstrated what it calls a revolutionary milestone in integrated photonics

STMicroelectronics to enable higher-performance cloud optical

STMicroelectronics (NYSE:STM), a global semiconductor leader serving customers across the spectrum of electronics applications, is unveiling its next generation of proprietary

Optical Bottleneck in AI: Data Center Interconnects Limit AI



This shift has ignited a surge in demand for high-speed optical modules -- the tiny transceivers that turn electrical signals into light and back again at rates up to 800 Gbps and beyond.

\$MXL KEY READ-THROUGHS FROM MAXLINEAR Q1 2026

Coherent, Lumentum, Fabrinet, and high-speed module suppliers benefit because the near-term volume pool remains conventional optical transceivers rather than a rapid shift to co

KD Tech -- High-Speed Optical Connectivity

KD provides semiconductors for high-speed optical networking in harsh environments. Applications in automotive, home & SOHO, and industrial benefit



Ask anyone what the AI boom is about and you get the same

The plumbing is the connective tissue. Optical modules, PCBs, high-speed interconnects, liquid cooling. Seven of the top ten optical module makers in the world are Chinese companies.

Intel Demonstrates First Fully Integrated Optical I/O Chiplet

Intel's OCI chiplet represents a leap forward in high-bandwidth interconnect by enabling co-packaged optical input/output (I/O) in emerging AI

Recent Advances of High-Speed Short-Reach Optical Interconnects



This article reviews and analyzes recent design challenges and advances of optical transceiver, phase-locked loop (PLL), and clock and data recovery (CDR) for data center applications with a distance of

Connectors, Cables, Optics, RF, Silicon to Silicon Solutions

Silicon-to-Silicon High-Speed Board-to-Board High-speed connectors, mezzanine systems with integral ground planes, high-density arrays, backplane

Rumor: Starting with TPU v8, Google will no longer use HBM? The

Sector Beneficiaries: - OCS (Optical Engine): Lightmatter, as the primary supplier, provides photonic packaging interfaces, integrating optical interfaces within the chip package to



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<https://www.entrenamientointeligente.es>