



NEWS RELEASE

Lumentum and Marvell Showcase Industry's First Integrated 450G High-Speed Optical Interface at OFC 2025

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Features Lumentum's integrated DFB-MZI solution that leverages differentiated InP technology, offering performance advantages over silicon photonics architectures to support next-generation AI/ML and cloud infrastructure

SAN JOSE, Calif.--(BUSINESS WIRE)-- Lumentum Holdings Inc. ("[Lumentum](#)"), a global leader in optical and photonic innovations for the cloud and networking markets, and [Marvell Technology, Inc.](#), a leader in data infrastructure semiconductor solutions, today announced an industry-first demonstration integrating Marvell® 400G/per lane PAM4 technology operating at 225 Gbaud with Lumentum's indium phosphide (InP) monolithically-integrated DFB-MZI optical transmitter. The demonstration will take place at the [2025 Optical Fiber Communications Conference and Exhibition](#) (OFC) at Lumentum booth #2119 in San Francisco, California, April 1-3, highlighting a significant milestone in advancing next-generation, high bandwidth, and lower power per bit optics for artificial intelligence (AI)/machine learning (ML) and cloud infrastructure.

The live demonstration features Lumentum's cutting-edge 450G PAM4 distributed feedback (DFB) laser integrated with a Mach-Zehnder (MZI) modulator, leveraging the company's differentiated InP technology. The integrated DFB-MZI solution offers clear performance advantages over silicon photonics, particularly in applications where signal integrity and efficiency are critical.

The combination of Marvell's advanced 400G technology and its extensive expertise in DSP and high-speed ASIC design complements Lumentum's optical innovation to maximize performance, reliability, and scalability. The combined demonstration showcases readiness for future-proof 3.2T optical transceivers essential for rapidly expanding AI/ML workloads and cloud-scale networking infrastructure.

"Lumentum's collaboration with Marvell marks our joint commitment to pushing the boundaries of 400G per lane technology innovation," said Matt Sysak, Lumentum CTO of Cloud and Networking. "Together, we are enabling 400G per lane solutions that go beyond what silicon photonics can offer, unlocking higher performance and scalability foundational for next-generation AI/ML and cloud

infrastructure.”

“We are excited to collaborate with Lumentum on this 400G per lane technology demonstration,” said Xi Wang, vice president and general manager, Connectivity Business Unit at Marvell. “These technological advancements will enable cloud data centers to increase bandwidth capacity, maximize output and enhance the efficiency of future data centers.”

About Marvell

To deliver the data infrastructure technology that connects the world, we’re building solutions on the most powerful foundation: our partnerships with our customers. Trusted by the world’s leading technology companies for over 25 years, we move, store, process and secure the world’s data with semiconductor solutions designed for our customers’ current needs and future ambitions. Through a process of deep collaboration and transparency, we’re ultimately changing the way tomorrow’s enterprise, cloud, automotive and carrier architectures transform—for the better.

About Lumentum

Lumentum (NASDAQ: LITE) is a market-leading designer and manufacturer of innovative optical and photonic products enabling optical networking and laser applications worldwide. Lumentum optical components and subsystems are part of virtually every type of telecom, enterprise, and data center network. Lumentum lasers enable advanced manufacturing techniques and diverse applications, including next-generation 3D sensing capabilities. Lumentum is headquartered in San Jose, California, with R&D, manufacturing, and sales offices worldwide. For more information, visit www.lumentum.com and follow Lumentum on [Bluesky](#), [Facebook](#), [Instagram](#), [LinkedIn](#), [X](#), and [YouTube](#).

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