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Marvell to Demonstrate Industry's First 400G/lane PAM4 Electrical-to-Optical Link Technology at OFC 2025

Marvell® 400G Technology is an Industry Breakthrough Enabling a New Generation of PAM4 Network Connectivity

SANTA CLARA, Calif., March 31, 2025 /PRNewswire/ -- [Marvell Technology, Inc.](https://www.marvell.com) (NASDAQ: MRVL), a leader in data infrastructure semiconductor solutions, will demonstrate the industry's first 400G/lane technology with complete electrical to optical link operating at 224 Gbaud at OFC 2025 taking place March 30-April 3, 2025 in San Francisco, CA. This technology was once considered impossible, but Marvell has now proven it in real silicon.

Marvell is also working with leading optical and switch companies to cultivate an ecosystem to develop products based on 400G/lane technology for AI and general-purpose cloud architectures. Marvell (booth #2129), Lumentum (booth #2119) and TeraHop (booth #2429) will showcase live demonstrations of the 400G technology for both optical and electrical applications at the conference. The demonstrations include PAM4 DSP, transimpedance amplifiers, modulator drivers, and photonics technologies developed for serial 400G/lane speed with PAM4 modulation.

400G/lane technology will enable cloud data centers to significantly increase bandwidth capacity across their infrastructure, maximize output, enhance the efficiency of future data centers and shorten the time required for AI training and other complex tasks. 400G/lane technology represents a 4x increase over the mainstream 100G/lane infrastructure in cloud and AI data centers today and a 2x increase over the 200G/lane infrastructure being deployed in the industry this year.

"Pluggable transceiver modules will remain the dominant solution for optical connectivity in data centers and other infrastructure through 2030," said Dr. Lee Xu, Executive Vice President and General Manager, Datacom Business Unit at Coherent. "Our collaboration with Marvell and the rest of the ecosystem will help ensure that our customers will have the fabric technology they need to deliver on the promise of AI."

"This demonstration clearly illustrates how Lumentum and Marvell are driving industry leadership and readiness in 400G per lane technology," said Matt Sysak, CTO of Cloud and Networking at Lumentum. "The next generation of 3.2T transceivers required for AI/ML and cloud infrastructure scale-out will benefit significantly from Lumentum's advanced high-speed InP technology, enabling unmatched performance and volume scalability."

"Networking takes an ecosystem. Through efforts like this, we can lay a foundation for the AI economy and continue to expand the opportunity for optics in infrastructure," said Osa Mok, Chief Marketing Officer, Terahop PTE Ltd.

"Marvell has a long history of innovation in PAM4 connectivity, being the first to demonstrate proven 100G/lane and 200G/lane, and now 400G/lane PAM4 connectivity, ushering in an entirely new generation of network connectivity for the future," said Xi Wang, vice president and general manager, Connectivity Business Unit at Marvell. "We're excited to be working with leading partners like Coherent, Lumentum, and TeraHop to forge a roadmap for the next chapter in networking."

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.

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