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Marvell Advances Interconnect Portfolio for Scale-up and Scale-out Fabrics at OFC 2025

Comprehensive Technology and Strong Ecosystem Support Delivering Higher Performance, Customization and Flexibility for Rack-, Row- and Cloud-scale AI Networks

SANTA CLARA, Calif., March 31, 2025 /PRNewswire/ -- [Marvell Technology, Inc.](#) (NASDAQ: MRVL), a leader in data infrastructure semiconductor solutions, today announced it will showcase its interconnect portfolio for scale-up and scale-out AI deployments at OFC 2025, taking place March 31–April 3 in San Francisco, CA. Marvell will share its strategy and vision through multiple presentations and demonstrations in its booth #2129 and partner booths.

Interconnect technology—the semiconductors, software and system that serve as a nervous system for reliably and rapidly transmitting data across accelerated infrastructure—is in the [midst of a revolution](#). The rapid buildout of data infrastructure worldwide is expected to more than triple the market for interconnect chipsets to \$11.5 billion by 2030, according to LightCounting. Additionally, interconnect technology will undergo a fundamental transformation, advancing to support higher speeds, extended distances, reduced latencies and increased data traffic volumes essential for training, inference and other AI and cloud services in the coming years.

For scale-up fabrics in racks and rows, [co-packaged optics](#) (CPO), [linear packaged optics](#) (LPO), co-packaged copper (CPC), [active electrical cable](#) (AEC) and [PCIe retimer](#) interconnect technologies will pave the way for row-scale computing systems containing hundreds of XPU and CPU several meters apart spread over multiple racks that can outperform today's systems in performance-per-watt and time-to-completion. New scale-out networking technologies such as 400G/lane networking and [coherent-lite DSPs](#) will greatly increase the carrying capacity of networks while extending the reach of links from meters to kilometers for more powerful, versatile cloud-scale infrastructure.

Products, technology and ecosystem initiatives Marvell will showcase at OFC 2025 include:

- **400G PAM4 Technology.** A live demonstration of the industry's first [400G/lane technology](#) with a complete electrical to optical link operating at 224 Gbaud. 400G is a critical step towards 3.2T optical interconnects and 204.8T switches.
- **Co-Packaged Platforms for AI Scale Up and Scale Out.** Marvell to showcase its CPO and CPC technologies for achieving higher interconnect densities and longer reach. Marvell will showcase system-level XPU and switch implementations supporting rapid servicing and ease of manufacture.
- **1.6T Silicon Photonics Light Engine for Scale-up Networks.** Marvell will show its [new 1.6T silicon photonics light engine](#) integrated into a 1.6T LPO reference design module operating at 200G/lane.

- **200G/Lambda 1.6T PAM4 Optical Interconnect for AI Scale Out.** Marvell will demonstrate Ara, the industry's first 3nm 1.6T PAM4 interconnect platform featuring 200 Gbps electrical and optical interfaces.
- **800G ZR/ZR+ Pluggable Optics for Multi-Site AI Training.** A live demonstration of COLORZ[®] 800 pluggable DCI module operating in several modes, including 800G ZR and 800G ZR+ with probabilistic constellation shaping, allowing for 800 Gbps transmission over distances of up to 1,000km.
- **200G/Lane 1.6T AEC for AI Scale Up and Scale Out.** A live demonstration showing production-ready Alaska[®] A AEC DSPs operating at 8 x 200G delivering 1.6T total bandwidth for multi-rack scale-up systems. In addition, multiple partners will showcase in their booths Alaska A 1.6T AEC DSPs for emerging 200G/lane-based accelerated infrastructure and Alaska A 800G AEC DSPs that deliver connectivity for up to seven meters.
- **PCIe Gen 6 and PCIe Gen 7 SerDes End-to-End Over Optics.** A hands-on [demonstration of an Alaska P PCIe Gen 6 retimer](#) driving PCIe signals between the root complex and end point over an optical fiber, using a 100G per lane LPO module supplied by TeraHop. Second technology demonstration highlights the performance of a 128G SerDes circuit designed for integration into future PCIe Gen 7 retimer devices using a TeraHop 200G per lane LPO module.
- **51.2T Scale-out Fabric:** Showcasing the switching and interconnect capabilities of its accelerated infrastructure portfolio for AI clusters, this demonstration utilizes CPU-powered servers as compute elements to show data traffic traversing a model AI cluster. The demonstration includes RDMA-enabled network interface cards, copper and optical interconnects, including 7m active electrical cables, and SONiC-enabled switches representing both frontend top-of-rack, middle-of-row, end-of-row leaf and spine applications and backend switch fabrics.

Marvell Presentations and Panels at OFC 2025

Throughout the conference, Marvell executives and technical experts will participate in key presentations, panels and workshops, discussing critical industry topics. The full agenda is available at <https://www.marvell.com/company/events/ofc-2025.html>.

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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those described in the "Risk Factors" section of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and other documents filed by us from time to time with the SEC. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and no person assumes any obligation to update or revise any such forward-looking statements, whether as a result of new information, future events or otherwise.

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