



NEWS RELEASE

Lumentum, Astera Labs, and Corning to Demonstrate 1060 nm VCSEL-Based PCIe over Optics for AI Rack-Scale Connectivity at the 2026 OCP Global Summit

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Joint rack-level demonstration combines Astera Labs Scorpio Smart Fabric Switch, Lumentum high-density VCSEL optical interconnect platform, and Corning multimode fiber connectivity

SAN JOSE, Calif.--(BUSINESS WIRE)-- Lumentum Holdings Inc. (NASDAQ: LITE), Astera Labs, Inc. (NASDAQ: ALAB), and Corning Incorporated (NYSE: GLW) today announced a joint demonstration of PCIe-over-optics connectivity for AI rack-scale architectures at the 2026 OCP Global Summit in San Jose, California. The rack-level demonstration combines an Astera Labs Scorpio Smart Fabric Switch with Lumentum's 1060 nm VCSEL-based optical interconnect platform and Corning multimode fiber connectivity. The demonstration will be available at Astera Labs booth #B34 from October 12-15.

The demonstration will showcase fully operational optical links that use VCSEL transmitters and photodetectors to extend PCIe connectivity within an AI rack. By transporting PCIe over many parallel optical channels, the architecture is designed to help address the reach, cable density, signal integrity, power, and thermal constraints that can limit conventional electrical interconnects as rack-scale AI systems grow.

The optical interconnect uses high-density 1060 nm VCSEL and photodetector arrays implemented with advanced packaging, including two-dimensional arrays with backside lens technology. Built on Lumentum's ultra-high-volume manufacturing platform in 3D sensing for smartphone devices, it is designed to support high bandwidth density, strong signal integrity, and efficient optical connectivity for rack-level AI architectures.

Astera Labs' Scorpio Smart Fabric Switch provides the switching element for the demonstration, showing how optical connectivity can extend reach within rack-scale AI systems while preserving a PCIe-based architecture.

The proof-of-concept system is designed to demonstrate multiple 32 Gb/s NRZ optical channels over

Corning multimode fiber and an error-free PCIe-5 link. The configuration combines a high-density Lumentum optical engine with Astera Labs' Scorpio Smart Fabric Switch in a rack-representative system arrangement.

"AI infrastructure is pushing optical connectivity closer to the compute system where reach, density, and power represent significant challenges," said Matt Sysak, Chief Technology Officer, Lumentum. "This demonstration with Astera Labs and Corning shows how Lumentum's 1060 nm VCSEL platform can extend PCIe connectivity and unlock a whole new class of functionality."

"As AI clusters scale to unprecedented levels, we are breaking the constraints of single rack-level architectures," said Adit Narasimha, Senior Vice President, Signal Connectivity Group, Astera Labs. "This demonstration shows how VCSEL-based front-end optics are enabled by Astera Labs' Scorpio Smart Fabric Switch and COSMOS link intelligence to deliver lower latency, improve power efficiency, increase bandwidth density, and overcome connectivity bottlenecks across rack-scale AI systems."

"As optical links move closer to compute devices, fiber connectivity must support increasing density, precision, and scalability," said Claude Echahamian, Vice President and General Manager, Emerging Businesses and EMEA, Corning Optical Communications. "Corning's multimode fiber solutions and industry-leading MMC connectivity help enable this demonstration and support the evolution of high-density optical interconnects for AI infrastructure. As AI clusters continue to grow in size and complexity, Corning is committed to developing fiber and connectivity technologies that enable emerging compute networks and smart fabric architectures."

About Lumentum

Lumentum (NASDAQ: LITE) is a global leader in optical and photonic technologies that power the networks and infrastructure behind AI, cloud computing, and next-generation communications. Built on decades of photonics innovation, Lumentum delivers high-performance lasers, modules, and optical subsystems that enable scalable, energy-efficient data center connectivity, advanced telecom networks, industrial manufacturing, and sensing applications. Headquartered in San Jose, California, the company operates R&D, manufacturing, and sales facilities worldwide. Learn more at www.lumentum.com.

About Astera Labs

Astera Labs (Nasdaq: ALAB) provides rack-scale AI infrastructure through purpose-built connectivity solutions. By collaborating with hyperscalers and ecosystem partners, Astera Labs enables organizations to unlock the full potential of modern AI. Astera Labs' Intelligent Connectivity Platform integrates CXL®, Ethernet, NVLink Fusion, PCIe®, and UALink™ semiconductor-based technologies with the company's COSMOS software suite to unify diverse components into cohesive, flexible systems that deliver end-to-end scale-up and scale-out connectivity. The company's custom connectivity solutions business complements its standards-based portfolio, enabling customers to deploy tailored architectures to meet their unique infrastructure requirements. Discover more at www.asteralabs.com.

About Corning Incorporated

Corning (www.corning.com) is one of the world's leading innovators in materials science, with a 175-year track record of life-changing inventions. Corning applies its unparalleled expertise in glass science, ceramic science, and optical physics, along with its deep manufacturing and engineering capabilities to develop category-defining products that transform industries and enhance people's lives. Corning succeeds through sustained investment in RD&E, a unique combination of material and process

innovation, and deep, trust-based relationships with customers who are global leaders in their industries. Corning's capabilities are versatile and synergistic, which allows the company to evolve to meet changing market needs, while also helping its customers capture new opportunities in dynamic industries. Today, Corning's markets include optical communications, mobile consumer electronics, display, automotive, solar, semiconductors, and life sciences.

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