Lightmatter Joins UALink™ Consortium to Propel AI Interconnect into the Photonic Era

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MOUNTAIN VIEW, Calif. – December 18, 2024 – [Lightmatter](#), the leader in photonic interconnect and supercomputing, has joined the Ultra Accelerator Link Consortium™ (UALink™), a new industry initiative focused on creating high-speed, low-latency open interconnect standards for scale-up AI systems. As a Contributor member, Lightmatter will apply its [Passage](#)™ technology—the industry's first 3D-stacked photonic engine—to revolutionize accelerator-to-accelerator communication, enabling unprecedented performance in AI clusters.

The UALink Consortium aims to standardize advanced interconnect solutions for large numbers of AI accelerators, initially targeting scale-up to 1,024 devices. Building on this vision, Lightmatter will collaborate with consortium partners to develop the standard, enabling seamless integration of XPU and switch silicon with its Passage platform. By eliminating chip shoreline constraints, Lightmatter's innovative 3D photonics technology drives massive increases in I/O density and bandwidth—up to hundreds of terabits per second (Tbps) per chip—while enabling more HBM capacity in scale-up accelerator AI clusters. These innovations pave the way for the next frontier AI models and support the execution of increasingly complex training and inference workloads.

"The UALink Consortium goals align perfectly with Lightmatter's mission to push the boundaries of AI interconnect," said Steve Klinger, VP, Product, Lightmatter. "We look forward to working with consortium partners to redefine the scalability and efficiency of next generation compute clusters. These advancements will be transformative for AI infrastructure."

About Lightmatter

Lightmatter is leading a revolution in AI data center infrastructure, enabling the next giant leaps in human progress. The company's groundbreaking [Passage](#)™ platform—the world's first 3D-stacked silicon photonics engine—connects thousands to millions of processors at the speed of light. Designed to eliminate critical data bottlenecks, Lightmatter's technology enables unparalleled efficiency and scalability for the most advanced AI and high-performance computing workloads, pushing the boundaries of AI infrastructure.

About UALink Consortium

Formed by industry leaders such as AMD, AWS, Cisco, and Meta, the UALink Consortium promotes a standardized approach to interconnects that enable high-performance AI systems. This collaboration fosters innovation, reduces implementation barriers, and opens the door to next-generation AI infrastructure. The UALink 1.0 specification will be publicly available in Q1 2025.

For more information, visit Lightmatter's website or the [UALink Consortium website](#).

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