Fabric.AI and Kopin Publish Joint White Paper on MicroLED Optical Interconnect Technology for Next-Generation AI Data Centers

Aug 03, 2026

Massively parallel architecture enables sub-picojoule-per-bit efficiency — a fraction of the energy consumed by conventional interconnects, with direct implications for data center power and cooling costs

The paper details how MicroLED optical links offer a roadmap to 20 Tb/s — scaling by channel count rather than lane speed as copper and laser-based optics approach physical limits

NEW YORK, NY, Aug. 03, 2026 (GLOBE NEWSWIRE) -- Fabric.AI, Inc. (Nasdaq: FABC), a fabless semiconductor company, and Kopin Corporation (Nasdaq: KOPN), a leading developer of microdisplay and MicroLED technology — joint developers of the Neural I/o™ MicroLED-based optical interconnect technology — today announced the publication of a jointly authored white paper, "Optical Interconnects as a Critical Enabler for Next-Generation AI Infrastructure," examining why data movement — not compute — has become the primary constraint on AI infrastructure, and how MicroLED optical interconnects address it.

The publication follows the companies' ongoing collaboration to commercialize Neural I/o™, a MicroLED-based optical interconnect platform designed to address the growing bandwidth and energy demands of next-generation AI infrastructure. The white paper outlines the technical and architectural principles underpinning that platform and explains why MicroLED-based optical interconnects may offer a more scalable and energy-efficient alternative as conventional interconnect technologies approach their physical limits.

The white paper is available here.

AI clusters now link tens of thousands of accelerators, and cluster performance is increasingly set by the interconnect rather than the processor. The white paper presents an architectural comparison of copper, laser-based optical, and MicroLED optical interconnects, and details how the MicroLED approach — moving data over hundreds to thousands of simple, low-power parallel channels instead of a few high-speed serial lanes — enables sub-picojoule-per-bit efficiency while scaling aggregate link bandwidth toward 20 Tb/s and beyond on published industry roadmaps.

Key topics covered in the white paper include:

- Why electrical interconnects face hard physical limits in bandwidth, power, reach, and heat as AI clusters scale
- How MicroLED's massively parallel architecture achieves per-bit energy consumption a fraction of the energy required by conventional interconnects — with direct implications for data center power, cooling, and capital costs
- How MicroLED arrays scale bandwidth by adding emitters within the same physical footprint — without redesigning data center cabling, connectors, or topology
- A roadmap analysis showing how channel count and per-channel speed compound toward 20+ Tb/s links

"The industry has spent decades making individual lanes faster, and that era is ending," said Michael Murray, Kopin Chief Executive Officer. "MicroLED technology changes the axis of scaling entirely. Kopin has spent years advancing the performance and manufacturability of MicroLED technology, and this paper lays out clearly why that foundation matters

for the largest infrastructure buildout in computing history."

"Every conversation about AI infrastructure eventually arrives at the same bottleneck: moving data between chips," said Josh Silverman, Fabric.AI Chief Executive Officer. "We wrote this paper with Kopin to give investors, operators, and engineers a clear, honest framework for understanding why interconnects have become AI's primary bottleneck — and why an architecture built on parallelism rather than lane speed is the path through that bottleneck. It reflects the thesis behind Neural I/o™, the platform we are developing together."**About Fabric.AI, Inc.**

Fabric.AI (Nasdaq: FBIC) is developing next-generation AI infrastructure technologies designed to overcome the bandwidth, latency, and power limitations of conventional computing architectures. The Company's proprietary Neural I/o™ platform leverages MicroLED-based optical interconnect technology to enable ultra-high-speed, energy-efficient communication between AI accelerators, processors, memory, and networking systems, supporting the growing demands of large-scale AI training and inference.

Through strategic collaborations with industry leaders and a focus on scalable, high-performance connectivity solutions, Fabric.AI is advancing technologies that have the potential to improve the efficiency, performance, and economics of next-generation AI data centers and high-performance computing environments.

For more information, visit Fabric.AI.

About Kopin Corporation Kopin Corporation (Nasdaq: KOPN) is a leading developer and provider of innovative display, Optical Interconnect devices and application-specific optical solutions sold as critical components and subassemblies for defense, enterprise, professional and consumer products. Kopin's portfolio includes microdisplays, display modules, eyepiece assemblies, image projection modules and vehicle mounted and head-mounted display systems that incorporate ultra-small high-resolution Active Matrix Liquid Crystal displays (AMLCD), Ferroelectric Liquid Crystal on Silicon (FLCoS) displays, MicroLED displays (µLED) and Organic Light Emitting Diode (OLED) displays, a variety of optics and low-power ASICs and optical interconnect devices for data centers.

For more information, please visit Kopin's website at www.kopin.com.

Kopin is a trademark of Kopin Corporation.

Forward-Looking Statements This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding technology roadmaps, projected bandwidth and efficiency capabilities, market growth, and product development timelines. Performance figures referenced in the white paper reflect published third-party industry demonstrations and roadmaps for the MicroLED interconnect category and do not represent measured results of any Fabric.AI or Kopin product. Actual results may differ materially due to risks and uncertainties described in each company's filings with the Securities and Exchange Commission, including [Fabric.AI's / Kopin's most recent annual and quarterly reports]. Neither company undertakes any obligation to update forward-looking statements except as required by law.

IR Contact:CORE IR212-644-0924ir@fabric-ai.co

Media Contact: Fabric.AIpress@fabric-ai.co www.fabricai.com

Source: Fabric.AI