

celestial AI™

Photonic Fabric Scale-Up Interconnects

Photonic Fabric Technology Breaks AI Scaling Limits

As AI models grow in size and complexity, memory bandwidth, interconnect latency, and power efficiency have emerged as the dominant constraints. Photonic Fabric technology uses optical signaling to move data with minimal loss, dramatically reducing power per bit while enabling far higher bandwidth density than conventional electrical interconnects.

Celestial AI Delivers Four Industry Firsts

Celestial AI delivered the industry's first all-optical scale-up interconnect, enabling high-bandwidth, low-latency optical connections between large clusters of AI accelerators. The company introduced the first 16 Tbps optical chiplet, far exceeding copper-based interconnects. Celestial AI pioneered co-packaged optics specifically designed for scale-up architecture, and enabled true disaggregated compute and memory through optical fabric with up to 25x greater bandwidth and 10x lower latency than standard CPO.

IT Brand Pulse Industry First Validation

If your company pioneers a new AI technology, product, or feature, let IT Brand Pulse prove it. Through competitive research we validate breakthrough claims and deliver a comprehensive report within 30 days. Validated companies receive an "Industry First" logo identifying their specific innovation, a credential that memorializes achievement with third-party credibility.

