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![MaxLinear logo]

MaxLinear Unveils Annapurna 224G Scale-Up Retimer to Extend Copper Connectivity in AI Data Centers

- *Advanced DSP enables power- and cost-efficient electrical scale-up networking for AEC and on-board retimer applications, complementing optical interconnects in optimized AI infrastructure.*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (Nasdaq: MXL), a leading provider of high-speed interconnect ICs for data center, metro, and wireless transport networks, today announced Annapurna, a high-performance scale-up retimer delivering up to 1.6Tbps of electrical connectivity. Annapurna enables copper backplanes and Active Electrical Cables (AECs) to operate reliably at 224Gbps per lane using PAM4 signaling, allowing system architects to deploy electrical solutions where they deliver the greatest power, latency, and cost advantages.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20260316901179/en/

New 224G DSP for scale-up retimers and active electrical cables from MaxLinear

Enabling Hybrid Optical and Electrical AI Architectures

As AI training clusters transition to 224G per lane signaling, data center operators must carefully balance bandwidth, power, cost, and reach. Optical interconnects remain essential for scale-out networking and longer distances, while electrical connectivity continues to offer compelling advantages for scale-up networking within and between racks.

At 224G per lane, however, traditional copper channels face significant physical constraints. Attenuation, return loss at interfaces, and impairments caused by skin-effect resistance, copper roughness, and inter-symbol interference limit reliable reach without advanced signal processing. These challenges can force sub-optimal usage of GPU and switch tray real estate given the need for placement of chips close to the backplane.

For large-scale GPU fabrics supporting synchronous AI training, maintaining electrical connectivity delivers meaningful benefits. Compared to optical transceivers, copper interconnects consume significantly less power per bit, introduce lower latency, and reduce overall system complexity. These factors become increasingly important as rack-scale AI systems push power density limits.

"Modern AI infrastructure increasingly relies on a hybrid approach that deploys optical and electrical connectivity where each provides maximum value," said Rajneesh Gaur, Senior VP & GM, Data Center Connectivity Business Unit, MaxLinear. "Within a data center, optical excels at longer reaches for scale-out networks, while copper remains highly attractive for scale-up networking if signal integrity challenges at 224G per lane can be addressed. Annapurna delivers the signal processing required to keep electrical connectivity viable at these speeds."

Annapurna: Extending Copper to 224G

The Annapurna Scale-Up Retimer incorporates advanced adaptive equalization, transmit pre-emphasis, and proprietary DSP algorithms to overcome electrical channel impairments at 224G per lane. These capabilities enable robust copper-based connectivity over distances that previously required optical solutions.

Available in eight- and sixteen-lane configurations, Annapurna supports 1.6Tbps and 3.2Tbps applications optimized for AEC and on-board retimer deployments. The device delivers ultra-low latency for GPU-to-GPU synchronization and high power efficiency, helping AI architects maximize performance while operating within strict power envelopes.

By extending copper's operational envelope to 224G data rates, Annapurna complements MaxLinear's optical DSP portfolio and supports emerging scale-up protocols including ESUN, UALink, and Ultra Ethernet. This provides customers with the flexibility to deploy the most appropriate interconnect technology for each segment of the AI fabric.

The volume for AEC and on-board copper retimers is expected to be 30 million units in 2029 according to LightCounting Research. Annapurna enables MaxLinear to capitalize on this opportunity to be able to increase its revenue.

Industry Endorsements

"As we architect our SkyHammer scale-up fabric, electrical connectivity at 224G per lane is fundamental," said Aravind Srikumar, SVP, Product & Marketing, Upscale.AI. "Our systems demand deterministic latency, guaranteed bandwidth, and strict power efficiency. Annapurna is an important enabler for signal integrity across our rack-scale AI systems."

"Advanced electrical DSPs like Annapurna allow copper to remain competitive at 224G, preserving power and cost advantages where they matter most," said Bob Wheeler, Analyst at Large, LightCounting Market Research. "MaxLinear's portfolio spanning both electrical and optical technologies positions the company for growth in the dynamic market for high-speed interconnects."

Key Product Features

- Two product variants with eight or sixteen lanes of 224Gbps PAM4 signaling
- Up to 3.2Tbps aggregate bandwidth
- Advanced adaptive equalization for 224G copper channels
- High power efficiency for AEC and on-board retimer applications
- Ultra-low latency for scale-up GPU fabrics
- Comprehensive telemetry and diagnostics

- Compliance with IEEE 802.3dj and OIF CEI-224G standards

Availability

The Annapurna Scale-Up Retimer is expected to be available in Q2 2026. For more information, contact your local MaxLinear sales representative.

Comprehensive Connectivity Portfolio

Annapurna extends MaxLinear's leadership in high-speed connectivity by enabling electrical solutions at 224G per lane. Together with our Rushmore optical DSP, Keystone and Keystone MM DSPs, and Topanga TIA products, the company provides comprehensive solutions for 400G, 800G, and 1.6T applications.

About MaxLinear, Inc.

MaxLinear, Inc. (Nasdaq: MXL) is a leading provider of radio frequency (RF), analog, digital, and mixed-signal integrated circuits for access and connectivity, wired and wireless infrastructure, and industrial and multi-market applications. MaxLinear is headquartered in Carlsbad, California.

For more information, please visit www.maxlinear.com.

Cautionary Note About Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, among others, statements regarding the capabilities of MaxLinear's Annapurna product and the functionality, performance and benefits of such product, the market opportunity for MaxLinear's Annapurna product, the expected volume for AEC and on-board copper retimers, statements regarding MaxLinear's ability to increase its revenue, the timing of availability of the Annapurna Scale-Up Retimer and statements by MaxLinear's Senior VP & GM, Data Center Connectivity Business Unit, Upscale.AI's SVP, Product & Marketing and Analyst at Large, LightCounting Market Research. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to be materially different from any future results expressed or implied by the forward-looking statements and our future financial performance and operating results forecasts generally. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties. In particular, our future operating results are substantially dependent on our assumptions about market trends and conditions. Additional risks and uncertainties affecting our business, future operating results and financial condition include, without limitation, risks relating to: the capabilities of MaxLinear's technology; our terminated merger with Silicon Motion and related arbitration and class action complaint and the risks related to potential payment of damages; the effect of intense and increasing competition; increased tariffs, export controls or imposition of other trade barriers; impacts of global economic conditions; the cyclical nature of the semiconductor industry; a significant variance in our operating results and impact on volatility in our stock price, and our ability to sustain our current level of revenue, which has previously declined, and/or manage future growth effectively, and the impact of excess inventory in the channel on our customers' expected

demand for certain of our products and on our revenue; escalating trade wars, military conflicts and other geopolitical and economic tensions among the countries in which we conduct business; international geopolitical and military conflicts; our ability to obtain or retain government authorization to export certain of our products or technology; the loss of, or a significant reduction in orders from major customers; legal proceedings or potential violations of regulations; information technology failures; a decrease in the average selling prices of our products; failure to penetrate new applications and markets; development delays and consolidation trends in our industry; inability to make substantial and productive research and development investments; delays or expenses caused by undetected defects or bugs in our products; substantial quarterly and annual fluctuations in our revenue and operating results; failure to timely develop and introduce new or enhanced products; order and shipment uncertainties and differences between our estimates of customer demand and product mix and our actual results; failure to accurately predict our future revenue and appropriately budget expenses; lengthy and expensive customer qualification processes; customer product plan cancellations; failure to maintain compliance with government regulations; failure to attract and retain qualified personnel; any adverse impact of rising interest rates on us, our customers, and our distributors and related demand; risks related to compliance with privacy, data protection and cybersecurity laws and regulations; risks related to conforming our products to industry standards; risks related to business acquisitions and investments; claims of intellectual property infringement; our ability to protect our intellectual property; security vulnerabilities of our products; use of open source software in our products; failure to manage our relationships with, or negative impacts from, third parties; and future decisions relating to our stock repurchase program.

In addition to these risks and uncertainties, investors should review the risks and uncertainties contained in our filings with the Securities and Exchange Commission (SEC), including our Current Reports on Form 8-K, as well as the information to be set forth under the caption "Risk Factors" in MaxLinear's Annual Report on Form 10-K for the year ended December 31, 2025. All forward-looking statements are based on the estimates, projections and assumptions of management as of January 29, 2026, and MaxLinear is under no obligation (and expressly disclaims any such obligation) to update or revise any forward-looking statements whether as a result of new information, future events, or otherwise.

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