

# MaxLinear Adds Two Quad TIA Devices to Telluride Family of 400Gbps PAM4 Products

 New MxL9154 and MxL9124 transimpedance amplifiers join DSP SoCs to provide a complete solution for 400Gbps PAM4 network equipment for intra-data center applications

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (NYSE:MXL), a leading provider of radio frequency (RF), analog and mixed-signal integrated circuits for the connected home, wired and wireless infrastructure, and industrial and multimarket applications, today announced the MxL9154 and MxL9124 quad transimpedance amplifiers (TIA) as new members of its Telluride family of components for linear PAM4 400Gbps network systems.

Telluride products enable system vendors to develop a 400Gbps optical interconnect module in a compact form factor for intra-datacenter applications. MaxLinear has already launched the first Telluride products, the MxL935XX family of DSP SoCs with integrated electroabsorption modulated laser (EA-EML) drivers. The MxL935XX products are the industry's first 400Gbps DSP SoC using the 100G per wavelength technology.

The MxL9154 offers extremely low input referred noise performance of 11pA/sqrt(Hz) while consuming very low power of 200mW/channel. The device offers a bandwidth of >25GHz including the photodiode (PD) and satisfies the stringent 53Gbaud PAM4 requirements by achieving 3 percent linearity up to overload conditions. The TIA also offers receive signal strength indicator (RSSI) outputs for all four channels. The MxL9154 is an ideal complement to the MxL9354X PAM4 DSP SoCs, which when shipped together deliver best-in-class performance for both power and cost.

The MxL9124 TIA offers the same functionality in a lower bandwidth option that is suitable for 50Gbps PAM4 applications. The TIAs can be paired with PIN PDs or an externally biased avalanche photodiode (APD) to achieve different performance and reach requirements. Together, the MxL9154 and MxL9124 deliver the bandwidth and noise performance for a range of applications including 200Gbps DR4, 200Gbps FR4, 200Gbps LR4, 400Gbps DR4, 400GbpsFR4 and 400Gbps LR8.

"PAM4-based 100Gbps wavelength technology is emerging as the best option for 400Gbps networks for intra datacenter applications. At these higher data rates, it is extremely important that all high-speed components be designed and optimized together to offer the best overall performance," said Will Torgerson, MaxLinear Vice President & General Manager. "The MxL9154 and MxL9124 TIAs have been developed in conjunction with the MxL9354X PAM4 DSP SoC for seamless optimization between the components."

The MxL9154 features an I2C interface that facilitates control of its performance directly from the MxL9354X PAM4 DSP SoC. With a die size of 3.2mm x 1.6mm, the TIA fits into quad-ROSA size restrictions required for the QSFP-DD and OSFP module form factors.

# **Availability**

The MxL9154 and MxL9124 are available now. Contact MaxLinear sales for more information at <a href="mailto:sales@maxlinear.com">sales@maxlinear.com</a>.

### About MaxLinear, Inc.

MaxLinear, Inc. (NYSE:MXL), a leading provider of radio frequency (RF), analog and mixed-signal integrated circuits for the connected home, wired and wireless infrastructure, and industrial and multimarket applications. MaxLinear is headquartered in Carlsbad, California. For more information, please visit <a href="https://www.maxlinear.com">www.maxlinear.com</a>.

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# **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 concerning the MxL9154 and statements concerning or implying the performance of MaxLinear's technologies, their potential use cases, and the potential impact of these technologies on our business and future operating results. 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. Forward-looking statements are based on management's current, preliminary expectations. In particular, our future operating results are substantially dependent on our assumptions about market trends and conditions and our expectations with respect to recently completed acquisitions, including our ability to integrate our recently completed acquisition of Exar Corporation. Additional risks and uncertainties arising from our operations generally and our recently completed acquisitions include intense competition in our industry; our dependence on a limited number of customers for a substantial portion of our revenues; uncertainties concerning how end user markets for our products will develop; potential uncertainties arising from continued consolidation among cable television and satellite operators in our target markets and continued consolidation among competitors within the semiconductor industry generally; our ability to develop and introduce new and enhanced products on a timely basis and achieve market acceptance of those products, particularly as we seek to expand outside of our historic markets; potential decreases in average selling prices for our products; risks relating to intellectual property protection and the prevalence of intellectual property litigation in our industry; indemnification obligations of Exar arising from a recent divestiture; the impact on our financial condition of acquisition indebtedness and cash usage arising from the Exar transaction; our reliance on a limited number of third party manufacturers; and our lack of long-term supply contracts and dependence on limited sources of supply. 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 the information under the caption "Risk

Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017. All forward-looking statements are based on the estimates, projections and assumptions of management as of the date of this press release, 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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Source: MaxLinear, Inc.