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MaxLinear Showcases Industry's First 100 Gbps Data Center Transceiver with Integrated Driver at ECOC 2018

New chipset builds upon the success of 400 Gbps data center transceiver chipset announced at ECOC 2018 to extend MaxLinear's leadership position in optical interconnects

ROME--(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 industry's first 100 Gbps transceiver with integrated driver at the European Conference on Optical Communication (ECOC) in Rome taking place from Sept. 24-26, 2018.

MaxLinear's Telluride family of SoCs are key components in the development of high-speed hyperscale datacenters based on 100Gbps/400Gbps optical interconnects. The MxL93512 is part of the Telluride family of devices, which are the world's first DSP SoCs with integrated electro-absorption modulated laser (EA-EML) drivers for 100 Gbps/400 Gbps optical interconnects.

The MxL93512 allows optical module vendors to develop a 100 Gbps optical interconnect module in a compact form factor for intra-datacenter applications with a transmission distance up to 2 Kilometers.

The MxL9351x SoCs are suitable for use within QSFP28 module form factors. Two options are currently available: the MxL93512 that integrates an EA-EML driver with 1.8V PP SE swing, and the MxL93513 that offers differential 800mV peak-to-peak swing for non EA-EML-based optics.

For module vendors looking for a complete chipset solution, the MxL9151 complements the MxL9351x family by offering a single linear TIA that supports 1x100Gbps receive optical sub assembly (ROSA) modules. This TIA offers very low input referred noise of 11pA/√Hz and linearity better than 3 percent while consuming only 200mW.

The Telluride chipset enables optical module vendors to utilize the latest PAM4-based 100 Gbps wavelength technology and deliver solutions with the best overall performance, power and cost.

"With the exponential growth of data traffic within hyperscale cloud networks, there is a huge need to deploy higher speed networks making 100 Gbps/400 Gbps transceiver modules essential to support next-generation hyperscale data centers," said Will Torgerson, Vice President and General Manager of the Infrastructure Group of MaxLinear. "Our customers

are impressed with Telluride's high level of integration as the industry's only solution designed with an integrated EA-EML driver and break-out mode support to simplify complex module designs while offering superior link-margin performance in a low-power consumption SoC."

Technical Details

The Telluride family features several operating modes that can connect to multiple generations of switch ASICs (128x25G NRZ, 256x25G NRZ or 256x50G PAM4) enabling 3.2Tbps, 6.4Tbps or 12.8Tbps front panel capacity per data center rack unit. These different operating modes span a variety of optical module form factors such as QSFP28, SFP-DD, QSFP-DD, OSFP and COBO.

The integrated laser driver delivers greater than 1.8V of single-ended driver output swing necessary for EA-EML lasers. This output swing easily meets the optical modulation amplitude (OMA) specification requirements across the wide operating temperature and bias ranges of all EA-EML lasers. The chip package also includes all the high frequency components required for driver and modulator biasing.

MaxLinear has engineered a very high-performance DSP engine in both the transmit and receive data paths. The resulting superior link-margin enables single-lane 100Gbps optical wavelength technology by mitigating many of the limitations of mass production optical components.

The devices feature a comprehensive digital pre-distortion (DPD) engine in the transmit direction to compensate for laser non-linearity, and to cancel packaging limitations that cause reflections and bandwidth degradation at these extremely high signal frequencies. On the receive path, the DSP includes an auto-adaptive signal enhancement engine, which integrates a continuous time linear equalizer (CTLE), automatic gain control (AGC), a feed forward equalizer (FFE), and a decision feedback equalizer (DFE).

About MaxLinear, Inc.

MaxLinear, Inc. (NYSE:MXL) is 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 www.maxlinear.com.

Cautionary Note About Forward-Looking Statements

This press release contains "forward-looking" statements within the meaning of federal securities laws. Forward-looking statements include, among others, statements concerning or implying future financial performance, anticipated product performance and functionality, or trends and growth opportunities affecting MaxLinear, in particular statements relating to MaxLinear's announcement of its 100Gbps transceiver with integrated driver. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from any future results expressed or implied by

these forward-looking statements. We cannot predict whether or to what extent MaxLinear's 100Gbps transceiver will affect our future revenues or financial performance. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Forward-looking statements may contain words such as "will be," "will," "expected," "anticipate," "continue," or similar expressions and include the assumptions that underlie such statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: intense competition in our industry and product markets; risks relating to the development, testing, and commercial introduction of new products and product functionalities; the ability of our customers to cancel or reduce orders; uncertainties concerning how end user markets for our products will develop; our lack of long-term supply contracts and dependence on limited sources of supply; potential decreases in average selling prices for our products; and the potential for intellectual property litigation, which is prevalent in our industry. In addition to these risks and uncertainties, investors should review the risks and uncertainties contained in MaxLinear's filings with the United States Securities and Exchange Commission, including risks and uncertainties identified in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018. All forward-looking statements are qualified in their entirety by this cautionary statement. MaxLinear is providing this information as of the date of this release and does not undertake any obligation to update any forward-looking statements contained in this release as a result of new information, future events, or otherwise.

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MaxLinear, Inc. Press Contact:
David Rodewald
The David James Agency LLC
Tel: 805-494-9508
david@davidjamesagency.com
or
MaxLinear, Inc. Corporate Contact:
Will Torgerson
Vice President & General Manager of the Broadband Group
Tel: +1 760-692-0711
wtorgerson@maxlinear.com

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