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MaxLinear Announces Production Availability of 5nm Keystone 800G PAM4 DSP Solutions for Hyperscale Cloud Deployments

- *The 800G DSP is part of MaxLinear's new Keystone family of highly integrated, low power 5nm CMOS PAM4 DSPs, addressing a range of 400G and 800G datacenter applications*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (Nasdaq: MXL), a leading provider of high-speed interconnect ICs enabling data center, metro, and wireless transport networks, today announced the production availability of the Keystone family of DSPs, the industry's first 5nm CMOS 800Gbps PAM4 DSP for hyperscale data center applications. Representing MaxLinear's third generation of PAM4 DSPs, Keystone enables small form factors, offers high integration, best-in-class power consumption, and has the flexibility to address multiple optical and electrical interconnect use cases.

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MaxLinear Announces Production Availability of 5nm Keystone 800G PAM4 DSP Solutions for Hyperscale Cloud Deployments (Graphic: Business Wire)

An ongoing surge in the use of cloud services to increase productivity and improve customer experiences underlies the growth of hyperscale data centers. According to Precedence Research, the global hyperscale data center market size is projected to reach approximately US$593B by 2030, up from an estimated US$62B in 2021. This massive increase in scale comes at an ever-increasing cost. Climate control measures are often more expensive, operationally, than running the compute. Further, heat removal systems usually have a large, detrimental carbon footprint. Low-power

solutions are absolutely critical for these applications.

“With the exponential growth of data traffic within hyperscale cloud networks, the needed increase in interconnect bandwidth in those networks requires a range of lower-power, higher-density interconnect solutions that support the required higher data rates,” said Drew Guckenberger, Vice President of High-Speed Interconnect at MaxLinear. “The extremely low power consumption and small form factors of Keystone solutions enable both 7Watt 400G optical module designs and 13Watt 800G designs. Significantly, we are now also extending these power advantages to the Active Electrical Cable (AEC) market, providing best-in-class power consumption there as well. With the power advantages of 5nm CMOS technology, we are directly addressing our customers’ critical needs for low power, highly integrated, high performance interconnect solutions in next generation hyperscale cloud networks.”

The Keystone 5nm DSP family has been designed to address both 400G and 800G applications. Variants supporting single mode optics (EML and SiPh), multimode optics (VCSEL transceivers and AOCs) and Active Electrical Cables (AECs) are all available and can be paired with companion TIAs to provide complete solutions for our customers.

The Keystone family will be on display during the OFC Conference from March 7 - 9, 2023, booth 2207. Contact MaxLinear to schedule a briefing.

Technical Details About Keystone

The Keystone family’s host side interfaces support 25.78125/25.5625/53.125/106.25Gbps signaling per lane over VSR, MR, and LR host channels. The line side interfaces also support the same rates and are targeted for 100G/λ DR, FR, and LR applications. All devices provide extensive DSP functionality, including line-side transmitter digital pre-distortion (DPD), transmit pre-emphasis (TX FIR), receiver feed forward equalization (FFE) and a proprietary MLSE-Lite capability.

The Keystone DSP family (MxL9364x, MxL9368x) also includes a monolithically integrated single-ended driver ideally suited for optical transceiver module implementations using electro-absorption modulated lasers (EMLs). Additionally, it features an optional monolithically integrated high-swing differential driver that can be used for direct drive of silicon photonics (SiPh) based modulators providing swings up to 4Vpp. The following channel configurations are available in each case:

- 8x50G to 8x50G
- 8x50G to 4x100G
- 4x100G to 4x100G
- 8x100G to 8x100G

These DSPs offer exceptional performance and signal integrity in a compact (12mm x 13mm) footprint suitable for next generation optical module form-factors such as QSFP-DD800 and OSFP800 and are also offered as Known Good Die (KGD) for higher density applications, such as OSFP-XD.

For additional information, please contact your local MaxLinear sales representative, or visit our website: www.maxlinear.com.

About MaxLinear, Inc.

MaxLinear, Inc. (Nasdaq: MXL) is a leading provider of radio frequency (RF), analog, digital and mixed-signal integrated circuits for the connectivity and access, wired and wireless infrastructure, and industrial and multimarket applications. MaxLinear is headquartered in Carlsbad, California. For more information, please visit www.maxlinear.com.

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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 of our products or products incorporating our products, and industry trends and growth opportunities affecting MaxLinear, in particular statements relating to MaxLinear’s Keystone family of DSPs, including but not limited to the size and growth of the global hyperscale data center market, potential market opportunities, functionality, availability and the benefits of use of such products and statements by MaxLInear’s Vice President of High-Speed Interconnect. 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 these new or existing products 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,” “expect,” “anticipate,” “continue,” or similar expressions and include the assumptions that underlie such statements. Additional risks and uncertainties affecting our business, future operating results and financial condition include, without limitation, risks relating to our proposed merger with Silicon Motion and the risks related to increased indebtedness; the effect of intense and increasing competition; impacts of a global economic downturn and high inflation; our ability to obtain government authorization to export certain of our products or technology; the political and economic conditions of the countries in which we conduct business and other factors related to our international operations; increased tariffs or imposition of other trade barriers; risks related to international geopolitical conflicts; risks related to the loss of, or a significant reduction in orders from major customers; 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 research and development investments; a significant variance in our operating results or rates of growth; claims of intellectual property infringement; any supply chain constraints; our ability to protect our intellectual property; and a failure to manage our relationships with, or negative impacts from, third parties. 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 arising from other factors affecting the business, operating results, and financial condition of MaxLinear, including those set forth in MaxLinear's most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as applicable. 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:
Matthew Lea
Head of Public Relations
Tel: +1 760.415.2529
mlea@maxlinear.com

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