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## **MaxLinear Launches MxL231 and MxL235 Programmable Gain Amplifiers for Broad Range of Next-Generation DOCSIS® 3.0 and 3.1 Gateways**

*MxL231 and MxL235 Enable Lowest Power, Size and Cost for Upstream Applications Migrating to 8-Channel DOCSIS 3.0 QAM and DOCSIS 3.1 OFDM*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (NYSE: MXL), a [leading provider of integrated radio frequency \(RF\) and mixed-signal integrated circuits](#) for broadband communications applications, today announced the MxL231 and MxL235 upstream programmable gain amplifiers (PGAs) for use in DOCSIS 3.0 and upcoming DOCSIS 3.1 gateways, respectively.

PGAs are utilized to amplify upstream communications from DOCSIS gateways back to head-end equipment.

Complementing the company's popular Full-Spectrum Capture™ (FSC™) receivers for 16-, 24-, and 32-channel DOCSIS 3.0 gateways, the MxL231 reduces front-end power dissipation by up to 1.6W compared to existing PGA offerings. As cable operators migrate from four-channel to eight-channel QAM upstream services, reducing power dissipation in the front-end simplifies thermal design efforts and reduces heat mitigation costs.

Additionally, the MxL231 has a smaller footprint than existing PGA devices and requires fewer external components, thereby reducing the PCB area required for upstream amplification. Using only a single 3.3V supply, the MxL231 now allows manufactures to eliminate the 5V supply from their gateway design entirely, simplifying layout and reducing system cost.

Leveraging design architecture similar to the MxL231, the MxL235 is optimized to meet the higher upstream power output required in the DOCSIS 3.1 standard. The MxL235 can deliver any combination of DOCSIS 3.0 and DOCSIS 3.1 channels up to a combined output power of 69dBmV. The MxL235 will be offered as a companion to MaxLinear's upcoming DOCSIS 3.1 FSC receivers.

"We are very excited to deliver more value to our DOCSIS customers with the introduction of the MxL231 and MxL235 upstream amplifiers," said Brian Sprague, MaxLinear's Vice President and General Manager for Broadband and Consumer Products. "We've leveraged our deep expertise in low-power design to benefit our customers with reduced front-end thermal costs as cable operators expand upstream bandwidth in DOCSIS 3.0 and 3.1."

## **Technical Highlights**

The MxL231 supports upstream frequencies up to 85MHz with up to eight 64-QAM upstream channels and a combined output power of up to 66dBmV. In this configuration, the device dissipates less than 1W while exceeding the adjacent channel power ratio requirements in the DOCSIS 3.0 specification. The MxL231 is compatible with all 16-, 24-, and 32-channel MaxLinear DOCSIS 3.0 Full-Spectrum Capture receivers.

The MxL235 supports upstream frequencies up to 204MHz as specified in the DOCSIS 3.1 standard. The device can deliver up to 69dBmV of combined output power across any combination of QAM or OFDM upstream channels. The MxL235 is compatible with MaxLinear's upcoming DOCSIS 3.1 Full-Spectrum Capture receivers.

Both the MxL231 and MxL235 run from a single 3.3V supply, further adding to the cost savings by eliminating the need for a 5V supply on gateway designs.

Customer samples of the MxL231 and MxL235 are available now. Please contact MaxLinear for ordering information.

## **About MaxLinear, Inc.**

MaxLinear, Inc. is a leading provider of radio-frequency and mixed-signal semiconductor solutions for broadband communications applications. MaxLinear is located in Carlsbad, California, and its address on the Internet is [www.maxlinear.com](http://www.maxlinear.com).

MxL, Full-Spectrum Capture, FSC and the MaxLinear logo are trademarks of MaxLinear, Inc. Other trademarks appearing herein are the property of their respective owners.

## **Cautionary Note About Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, among others, statements concerning or implying future financial performance or trends and growth opportunities affecting MaxLinear, in particular statements relating to the introduction of the MxL231 and MxL235 upstream PGAs for use in DOCSIS 3.0 and DOCSIS 3.1 gateways, respectively. 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 we will realize revenues from the introduction of the MxL231 and MxL235 upstream PGAs. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties, including (among others) intense competition in our industry; 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; currently pending intellectual property litigation; and the potential for additional 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, 2014. 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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