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MaxLinear Launches Low Power, Full-Spectrum Capture™ DOCSIS 3.1 Cable Receiver for Multi-Gigabit Services

- *MxL278 tuner capable of receiving up to 5Gbps data rates over existing cable network*
- *MxL236 companion PGA reduces operator maintenance costs with integrated upstream monitoring*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear Inc. (NYSE: MXL), a leading provider of highly integrated radio frequency (RF) and mixed-signal integrated circuits for broadband communication applications, today announced availability of the MxL278, its industry-leading 28nm CMOS single-chip DOCSIS 3.1 digital cable front-end receiver based on the company's proprietary Full-Spectrum Capture™ (FSC™) technology, and the MxL236 programmable gain amplifier for new generations of DOCSIS 3.1 gateways.

In conjunction with the latest DOCSIS 3.1 Intel cable SoC platform, cable MSOs will be able to offer their subscribers multi-gigabit-per-second data bandwidth services on existing coaxial cable network infrastructure. The ever-increasing consumer demand for media and over-the-top (OTT) data content is creating enormous downstream bandwidth demand in gateway devices to enable expanded services at home.

The DOCSIS 3.1 standard addresses the need for higher data bandwidth services with the addition of high capacity orthogonal frequency-division multiplexing (OFDM) channels over the existing cable network. Capturing up to 1.2 Gigahertz (GHz) of cable spectrum, the MxL278 DOCSIS 3.1 receiver enables cable operators to meet consumer demand through flexible deployment of downstream bandwidth between OFDM and legacy QAM services. Designs based on the MxL278 will usher in a new generation of high capacity IP data gateways, home media gateways, and hybrid or IP-based set-top boxes.

As cable operators offer greater bandwidth services to meet consumer demand for content, MaxLinear's proprietary FSC technology replaces the need for several discrete single-channel cable tuners in a gateway or a set-top box with just one broadband multi-channel receiver.

The MxL278 can receive up to 5Gbps with any combination of channels located arbitrarily inside the cable spectrum. As a result, MaxLinear's FSC cable receivers significantly reduce the power consumption in a gateway or a set-top box, minimize PCB footprint, eliminate expensive external RF components, and simplify design of customer platforms requiring multiple channel access.

Companion PGA Brings Upstream Monitoring to Gateway Design

Complementing MaxLinear's MxL278 FSC receiver for DOCSIS 3.1 gateways, the MxL236 PGA delivers valuable upstream network maintenance capabilities. The MxL236 introduces functions that report network health and performance parameters on the upstream link, which can be used by cable operators in managing and troubleshooting their networks. This innovative feature allows cable operators to avoid costly technician visits to customer homes by remotely monitoring and diagnosing potential problems with customer premises equipment.

The MxL236 reduces front-end power dissipation by up to 2.9W compared to other DOCSIS 3.1 PGA offerings. As cable operators increase upstream data rates to offer more symmetrical services to consumers, reducing power dissipation in the front-end simplifies thermal design efforts and reduces heat mitigation costs.

"We are very excited about our industry-leading DOCSIS 3.1 receiver and PGA for the deployment of high capacity IP data services," said Will Torgerson, MaxLinear's Vice President and General Manager, Broadband Group. "With their incredibly low power consumption, superior integration and small footprint, the MxL278 and MxL236 set the benchmark for simplicity, size and power savings in upcoming multi-gigabit-per-second services. As cable operators migrate to advanced IP-based platforms, our Full-Spectrum Capture technology will not only facilitate more efficient IP distribution, but will also result in significant power and cost savings in gateway designs."

MxL278 Technical Highlights

Based on MaxLinear's industry-leading, low-power 28nm CMOS process technology, the MxL278 offers a monolithic digital cable front-end with integrated LNA and signal conditioning functions combined with a Full-Spectrum Capture receiver with up to 1.2GHz that supports up to two OFDM channels and up to 32 legacy QAM channels. The MxL278 also provides an integrated MoCA2.1 transceiver supporting two bonded channels with integrated PA/LNA, DAC/ADC, and switch, thereby eliminating the need for any external components for in-home networking.

When utilizing all OFDM and QAM capabilities, the MxL278 delivers up to 5Gbps data rates downstream and up to 2Gbps data rates upstream, all over the existing cable network while consuming less than 1.4W. Furthermore, the MxL278 can be used in an ultra-low power "battery backup/green" mode, consuming roughly 500mW total, while still meeting cable operator voice call and standby time requirements upon loss of power to the home.

The MxL278 supports remote spectrum analyzer functions on the downstream and upstream links that report network health and performance parameters. This turns every gateway into a tool for operators to diagnose their network health without costly technician visits to the field.

The MxL278 exceeds requirements for DOCSIS 3.1, including the stringent test scenarios under SCTE40 plant loading and impairment conditions. The device supports a high-speed serial interface to a DOCSIS 3.1 modem, and has an integrated single-channel tuner for low-power operation.

MxL236 technical highlights

The MxL236 supports upstream frequencies up to 204MHz with any combination of OFDM and QAM channels with a combined output power of up to 65dBmV at the cable connector. In this configuration, the device dissipates 2.9W less than competing DOCSIS 3.1 PGA offerings.

In conjunction with the MxL278, the MxL236 introduces functions to report network health and performance parameters on the upstream link, allowing operators to reduce maintenance costs by reducing technician truck rolls.

The MxL236 has a smaller footprint than competing DOCSIS 3.1 PGA devices and requires fewer external components, thereby reducing the PCB area required for upstream amplification. Using only a single 3.3V supply, the MxL236 allows manufacturers to eliminate the 5V supply from their gateway design entirely, further simplifying layout and reducing system cost.

Availability

The MxL278 DOCSIS 3.1 receiver with integrated MoCA 2.1 transceiver is available for sampling in a standard 10mm X 10mm QFN package. The MxL236 is available for sampling in a standard 7mm x 7mm QFN package. Please contact MaxLinear for ordering information.

About MaxLinear, Inc.

MaxLinear, Inc. is a provider of integrated, radio frequency, and mixed-signal integrated circuits for broadband communications and data center, metro, and long-haul transport network 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 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, including statements relating to the introduction and performance of the MxL278 receiver and the MxL236 PGA. 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 MxL278 and the MxL236. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties, including (among others) integration risks arising from our recent acquisition of Entropic Communications, Inc.; 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 our most recent Quarterly Report on Form 10-Q for the quarter ended June 30, 2015. 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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