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MaxLinear and MStar Develop Set-Top Box Reference Design for Ultra High Definition Satellite Broadcast TV

- *Collaboration results in highly optimized solution that accelerates time-to-market for leading satellite operators worldwide*

AMSTERDAM--(BUSINESS WIRE)-- **RAI Amsterdam, IBC Exhibition – MaxLinear Inc. (NYSE: MXL),** a leading provider of radio frequency (RF) and mixed-signal integrated circuits for cable and satellite broadband communications, the connected home, data center, metro, long-haul fiber networks, and wireless infrastructure, and MStar Semiconductor announced a joint reference design aimed at accelerating the deployment of ultra-high definition (UHD) set-top boxes (STB) and multichannel personal video recorders (PVRs) for satellite pay-TV operators worldwide.

The new reference design combines the MxL5x2C, MaxLinear's third-generation, single-chip Full-Spectrum Capture™ (FSC™) multichannel satellite receiver, with MStar's high performance "K7" STB system-on-chip (SoC).

The platform incorporates up to eight tuners and supports the latest high-efficiency video coding (HEVC/H.265), ultra-high definition (UHD) "4K" video display, and high dynamic range (HDR) technologies in a very cost-effective, small form factor design. The platform is able to support all of the leading conditional access (CAS) solutions as well as and Linux- or Android-based middleware solutions from leading vendors.

The platform is scalable from three to eight tuners depending on which MaxLinear pin-compatible front end device is used. The MxL5x2C devices integrate two wideband RF inputs and support virtually all satellite low-noise block (LNB) down converter configurations, including Unicable (EN50607 & EN50494) LNBs, wideband LNBs, digital channel stacking switch (dCSS) LNBs and multiswitches. Multiple tuners enable operators to leverage the reference design to develop STBs that provide advanced services such as up to eight simultaneous recordings, ultra-fast channel change times, and streaming of live channels to multiple screens in the home.

K7 is a highly integrated, high performance ARM-based quad core and Mali multi-core GPU with a built-in 4K SOC for STB applications. The device supports a variety of video decoder/encoder formats, including MPEG-1/2/4, H.264, H.265, VC-1, VP-8, and VP-9 under advanced conditional access requirement with TEE. It also features integrated USB 3.0, HDMI 2.0a Rx/Tx, PCIe, SATA and other key interfaces that deliver important functionality for end product requirements.

“Ultra HD technology provides a compelling opportunity for satellite operators to differentiate their services and attract new customers,” said Wayne Tsai, Marketing Director at MStar. The MStar/MaxLinear UHD satellite reference design demonstrates how multi-channel UHD and HD content can be viewed on multiple different screens, transforming the viewing experience.

“HEVC and 4K are key technology drivers for all of the satellite operators,” said Will Torgerson, MaxLinear’s Vice President and General Manager, Broadband Group. “MaxLinear’s multichannel FSC satellite receivers are a perfect complement to MStar’s HEVC/4K media processors and this enables OEMs get to market quickly with a proven, competitive solution.”

Availability

The joint reference design platform is available now to select customers. It will be on display at IBC 2016, September 9-13, in MaxLinear’s private suite at the Holiday Inn Amsterdam, or at MStar’s booth at Balcony Suite BM5/6, Hall 1.

Technical Highlights – MxL5x2

The MxL5x2C product family includes three devices with two wideband tuner inputs and either three (MxL532C), four (MxL542C) or eight (MxL582C) demodulators. All the devices are pin-compatible and available in a very small, low cost 10mm x 10mm QFN package.

The MxL5x2C devices integrate all active front-end components, including the low-noise amplifiers (LNA). Due to the high levels of system integration, the bill of material (BOM) in end applications is reduced to a minimal number of low-cost passive components and a crystal, which enables ultra-compact low-cost system solutions.

The capture bandwidth of each RF input can be configured to match conventional L-band requirements (950MHz – 2150MHz) or to a wider bandwidth (250MHz – 2300MHz). Other benefits of the FSC technology includes embedded remote spectrum monitoring, which provides built-in performance monitoring and remote diagnostics for satellite operators.

The low-power and power-control flexibility of the MxL5x2C devices enable compliance with the requirements of Energy Star and the European Code of Conduct for Digital TV Services and Broadband Equipment for both standby and operating modes.

About MaxLinear, Inc.

MaxLinear, Inc. (NYSE: MXL), a leading provider of radio frequency (RF) and mixed-signal integrated circuits for cable and satellite broadband communications, the connected home, data center, metro, long-haul fiber networks, and wireless infrastructure markets. MaxLinear is headquartered in Carlsbad, California. For more information, please visit www.maxlinear.com.

About MStar

MStar Semiconductor, Inc. is a world-class leader in application specific ICs with a focus on consumer electronic products and communication applications. Since the company's inception in 2002, MStar has established a strong brand and leadership position in LCD controller, analog and digital TV, and set-top box markets by fully leveraging its core expertise of cutting-edge design capabilities, continuous innovation and premier customer-focused services. Headquartered in Taiwan, MStar has a comprehensive global footprint of international R&D and customer support centers to provide a full range of total solutions for various consumer electronic applications. For more information, please visit mstarsemi.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 related to the performance of MaxLinear's MxL5x2C product family. 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. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties, including (among others) risks relating to integration of our recently announced acquisitions of assets from Microsemi Corporation and from Broadcom; 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 Annual Report on Form 10-K for the fiscal year ended December 31, 2015 as amended by Amendment No. 1 filed with the SEC on April 28, 2016; our subsequent Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016; and our Current Reports on Form 8-K. 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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