

# MaxLinear to Showcase 4K Satellite Full-Spectrum Capture™ Technology at IBC 2014

 MxL862 24-channel digital channel stacking (DCS) SoC combined with MxL581 8channel satellite receiver in demonstration of 4K satellite reception

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, will demonstrate its latest range of Full-Spectrum Capture™ (FSC™) low-power satellite products at IBC 2014.

The demonstration will showcase the end-to-end reception of 4K Ultra High Definition (UHD) content, from GT-SAT's digital satellite low-noise block (dLNB) downconverter to a 4K UHD multichannel satellite gateway, both utilizing MaxLinear's market-leading FSC technology. MaxLinear will demonstrate the platform at the Holiday Inn Amsterdam during the IBC2014 exhibition, September 12-16.

The digital channel-stacking (DCS) LNB and 4K UHD satellite gateway system solution is targeted at the growing number of satellite pay-TV operators looking to cost-effectively deliver broadcast 4K services along with other value-added features such as multi-channel recording, multi-room viewing, and content streaming to multiple devices throughout the home.

The 4K UHD satellite gateway, a collaboration between MaxLinear and STMicroelectronics, combines MaxLinear's ultra-low power MxL581 Full-Spectrum Capture eight-channel receiver SoC with ST's STiH412 Monaco HEVC Ultra High Definition Decoder. The platform supports high-efficiency video-coding (HEVC/H.265) multi-channel decode, UHD display, multi-channel recording, video-on-demand (VOD), real-time transcoding of multiple streams, and state-of-the-art HD graphics.

The dLNB features MaxLinear's market-leading MxL862 DCS SoC, and GT-SAT's dHello advanced channel-stacking switch communication protocol, delivering up to 24 channels on a single cable to the home. The system also supports EN50494 and EN50607 standard protocols for single cable satellite signal distribution.

"The combined system solution from MaxLinear, ST and GT-SAT provides a very compelling value proposition in terms of power, performance and price," said Brian Sprague, MaxLinear's Vice President and General Manager. "This platform provides our customers with a cutting edge solution to address the growing demand for 4K TV and multi-channel distribution throughout the home."

"GT-SAT is pleased to partner with MaxLinear and ST to demonstrate a complete end-to-end 4K Ultra High Definition platform. GT-SAT's dLNB, based on MxL862 SoC and running dHello advanced channel stacking switch protocol, is a key building block to this demonstration platform," said Guil Mediouni, CEO of GT-SAT Intl. "Working with MaxLinear and ST has meant that we can now offer 4K Ultra High Definition solutions with the performance, power and features that operators in these markets require."

"ST is pleased to partner with MaxLinear and GT-SAT to deliver complete system solutions for satellite operators worldwide," said Hervé Mathieu, Box and Gateways Business Line Director, Unified Platform Division, STMicroelectronics. "The scalable nature of this platform will enable satellite operators to deliver cost-effective 4K video and multichannel services to their subscribers, with a seamless upgrade path to more channels and additional features in the future."

## **Technical Highlights – MxL862**

The MxL862 digital channel stacking SoC features two FSC wideband RF inputs with a total capture bandwidth of 4.1 GHz. The device is optimized for low-power single-feed digital LNB applications and supports FSK, DiSEqC / EN50607 and GT-SAT's dHello control protocol operation on the IF port.

The MxL862 comes with a software environment that includes a real-time operating system running on an embedded 32-bit CPU with application software to control the channel-stacking engine and the chip interfaces.

The ultra-small part is packaged in a 10mm x 10mm QFN. The bill of material (BOM) in end applications is reduced to a minimal number of low-cost, passive components, which enables ultra-compact, low-cost system solutions when compared to existing analog implementations.

## **Technical Highlights – MxL581**

The MxL581 device includes a full-spectrum capture satellite tuner and eight DVB-S2/S demodulators to support a wide range of low power, multi-channel satellite TV services. The device supports Unicable (EN50494 and EN50607) for single cable distribution from the LNB to the home.

The MxL581 integrates all active front-end components, including the low-noise amplifiers (LNA), and the high level of integration enables ultra-compact, low-cost system solutions. The low-power and power-control flexibility of the MxL581 device enables compliance with the requirements of Energy Star and the European Code of Conduct for Digital TV Services and Broadband Equipment, in both standby and full operating modes.

A complete reference design kit is available, including reference hardware and software drivers for MxL5xx and the STiH3xx "Cannes" and STiH4xx "Monaco" SoCs. The MxL581 device is currently in mass production and available in a very low cost 10mm x 10mm QFN package.

# **Technical Highlights - STiH412**

The Monaco family includes the HEVC Ultra HD STiH418 (4Kp60@10bit, VP9 & VP8),

STiH414 (4Kp60@10bit, VP8), STiH412 (4Kp30, VP8), and cost-optimized derivatives (STiH410 and STiH407) for Full HD (1080p) markets.

The Monaco SoC family provides an economical, yet full-featured solution for media server applications. It delivers high computing capabilities based on ARM multi-core processors, superior 2D/3D graphics performance, integrated hardware video encoders with preprocessing, and Faroudja®-enhanced video processing. The devices also feature a comprehensive security toolbox for premium content delivery. The ST Faroudja Transcode Engine provides best-in-class transcoding capabilities for multi-screen experiences across consumer and handheld devices. This allows operators to reduce their network bandwidth while offering an excellent quality of service throughout the home.

## About MaxLinear, Inc.

MaxLinear, Inc. is a leading provider of radio-frequency and mixed-signal semiconductor solutions for broadband communications applications. MaxLinear is headquartered in Carlsbad, California. For more information, please visit www.maxlinear.com.

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#### About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2013, the Company's net revenues were \$8.08 billion. Further information on ST can be found at <a href="https://www.st.com">www.st.com</a>.

#### **About GT-SAT**

GT-SAT Intl. is a leading design house and manufacturer of satellite LNBs and accessories, providing solutions that are optimized for worldwide TV operators. GT-SAT is based in Luxembourg. For more information, please visit <a href="http://www.gt-sat.com">http://www.gt-sat.com</a>.

# **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 STMicroelectronics, GT-SAT, and MaxLinear, in particular statements relating to the parties' collaborations on the end-to-end reception of 4K UHD content, from GT-SAT's dLNB downconverter to a 4K UHD multichannel satellite gateway, both utilizing MaxLinear's FSC technology. 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.

The parties cannot predict whether or to what extent any of the companies will realize additional revenues from these collaborations. 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 guarter 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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