

# MaxLinear Digital Channel Stacking Satellite SoC Deployed in GT-SAT's New "DLNB"

• MxL862 used in GT-SAT's new digital LNB helps European and Latin American satellite operators migrate to digital channel stacking

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear Inc. (NYSE:MXL), <u>a leading provider of integrated radio frequency (RF) and mixed-signal integrated circuits</u> for broadband communications applications, today announced that GT-SAT International of Luxembourg has deployed MaxLinear's Full-Spectrum Capture<sup>™</sup> (FSC<sup>™</sup>) MxL862 in a new digital satellite low-noise block (DLNB) downconverter.

Satellite operators in Europe and Latin America are moving to DLNBs so that they can provide multi-channel distribution to the home via a single-cable connection from the LNB to the set-top box. GT-SAT chose the MxL862 channel stacking system on chip (SoC) because it offers significantly lower power draw and an unprecedented level of integration, which simplified GT-SAT's DLNB design.

The DLNB is based on GT-SAT's own dHello advanced channel stacking switch protocol. dHello uses DiSEqC protocol commands and is backward compatible to any device supporting a minimum of DiSEqC 1.x. It is comprised of four commands that provide the control mechanisms for all channel-stacking functions. The protocol supports both satellite and terrestrial frequency ranges and supports C-, Ku- and Ka-band satellites and both linear as well as circular polarization. The converted frequency is sent in a format that supports a wide range of LNBs, including wide-band and universal architectures, as well as multiswitches.

The MxL862 is designed to exceed strict RF performance from leading direct broadcast satellite operators. Having this additional performance helped GT-SAT significantly reduce the design complexity and enter the market quickly.

MaxLinear's MxL862 configurability was also important in the DLNB design process. The channel stacking engine is fully configurable through an application programming interface (API). It can be configured to support legacy static line up of 30 channels or more, while enabling seamless migration to dynamic channel stacking as operators deploy more advanced services.

"DLNBs are essential to a satellite operator's multi-channel strategy. With its Full-Spectrum Capture technology and integrated functionality, the MxL862 will give GT-SAT a great time-to-market advantage," said Brian Sprague, MaxLinear Vice President and General Manager.

"GT-SAT is breaking new ground with its digital channel stacking LNB product and it has been exciting to work with them to bring this product to market."

"These LNB developments are consistent with our vision of being the best RF provider for leading satellite operators in Europe and Latin America," said Guil Mediouni, CEO of GT-SAT Int. "Working with MaxLinear has meant we've been able to develop LNBs with the performance, power and features that operators in these markets require."

## **Technical Details**

The MxL862 has two FSC wideband RF inputs with a single L-band IF output. The MxL862 supports a total RF capture bandwidth of 4.1 GHz.

The MxL862 supports FSK, DiSEqC / EN50607 and GT-SAT's dHello operation on the IF ports. The device comes with a software environment that includes a real-time operating system running on an embedded 32-bit CPU with a complete set of APIs to control the channel stacking engine and the chip interfaces.

The ultra small part is packaged in a 10mm x 10mm QFN. The highly integrated device also features all major supporting analog functions, such as broadband input and output filters, RF gain blocks, PLLs and automatic gain control (AGC) functionality. 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, which enables ultra-compact, low-cost system solutions when compared to existing analog implementations.

It is part of the MxL86x product family, which includes the MxL868 and MxL865.

## 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 <u>http://www.gt-sat.com</u>.

## 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 <u>www.maxlinear.com</u>.

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

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, among others, statements relating to or implying future financial performance, trends and growth opportunities in specific product markets such as satellite applications, and opportunities associated with new product offerings and our strategy to expand our addressable market. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may

cause actual results to be materially different from any future results expressed or implied by the forward-looking statements. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties. Risks and uncertainties affecting our business, operating results, and stock price, include, among others, intense competition in our industry; our dependence on a limited number of customers for a substantial portion of our revenues; uncertainties concerning how end user markets for our products will develop, including end user markets for satellite applications of our products; our ability to develop and introduce new and enhanced products on a timely basis and achieve market acceptance of those products, particularly as we seek to expand outside of our historic markets; potential decreases in average selling prices for our products; limited trading volumes; risks relating to intellectual property protection and the prevalence of intellectual property litigation in our industry, including recently filed actions against us with the United States International Trade Commission and in United States District Court in Delaware; our reliance on a limited number of third party manufacturers; and our lack of long-term supply contracts and dependence on limited sources of supply. In addition to these risks and uncertainties, investors should review the risks and uncertainties contained in our filings with the Securities and Exchange Commission (SEC), including our Annual Report on Form 10-K for the year ended December 31, 2013.

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