March 3, 2025

MaxLinear Showcases Sierra Radio SoC Linearization Performance at MWC 2025

- *Sierra demonstration highlights O-RU system integration, performance, flexibility, energy efficiency, and O-RAN interoperability*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (Nasdaq: MXL), a leader in wireless infrastructure silicon solutions, today announced that it will showcase its highly integrated “Sierra” Radio System on Chip SoC as a complete Open RAN Radio Unit (O-RU) solution at MWC 2025. The demonstration highlights Sierra as a disruptive new silicon platform enabling radio vendors to rapidly and cost effectively develop new O-RUs with smaller size, lower weight, higher energy efficiency, and maximum system reuse across all radio unit (RU) applications including traditional macro, massive multiple-input and multiple-output (MIMO), and small cell.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20250302831723/en/

Sierra radio SoC linearization performance showcased at MWC 2025 (Graphic: Business Wire)

MaxLinear will demonstrate Sierra simultaneously linearizing four different radio frequency (RF) power amplifiers (PAs). The PAs are operating in both Frequency Division Duplex (FDD) and Time Division Duplex (TTD) bands, have four different output power levels from 100W macro down to 1W small cell, and are from four different PA technology suppliers using different high power silicon processes. The PAs being linearized are:

- RFHIC’s 100W ID19801D GaN power amplifier module
- Macom’s 55W GTRB384608 GaN power amplifier
- NXP’s 9W A5M36TG140 Airfast® LDMOS and GaN power amplifier module
- Skyworks’ 1W SKY66525-11 GaAs power amplifier

"MaxLinear's advanced linearization technology, when combined with RFHIC's GaN transistors, delivers superior linearity in power amplifiers while optimizing efficiency by balancing resource allocation for enhanced performance. This integration enables exceptional wideband signal analysis, ensuring seamless compliance with stringent communications standards," said Lucas Oh, Director of Telecommunications Business Division of RFHIC.

"Showcasing its very high efficiency and compact form, our SKY66525-11 power amplifier and the SKY6652x family of power amplifiers deliver excellent performance for the key 5G TDD frequency bands, making them a good match to support Sierra's digital predistortion performance," said Aroonchat Chatchaikarn, senior director of product marketing at Skyworks. "We're proud to partner with MaxLinear on this demo at MWC 2025 featuring our PAs that can be used in applications from traditional base stations to Massive MIMO and more."

MaxLinear and its PA partners will be demonstrating at the Mobile World Congress 2025 trade show (Hall 2, Meeting Room 2L8MR) from March 3-6.

About MaxLinear's Sierra Radio SoC Solution

Sierra's RF transceiver uses a low-power wide-band Zero-IF (ZIF) architecture and supports 8 transmitters (TX) and 8 receivers (RX) with 2 feedback receivers (FBRX). Each RX supports wide signal bandwidths up to 400MHz and each TX and FBRX supports signal bandwidths up to 900MHz. It can operate in 8T8R single-band or 2 x 4T4R multi-band configurations.

The digital front-end (DFE) integrates digital pre-distortion (DPD), Crest Factor Reduction (CFR), PIM cancellation (PIMC), digital up conversion (DUC), and digital down conversion (DDC) blocks. MaxLinear's proprietary DPD/CFR technology, MaxLIN™, linearizes power amplifiers (PA) up to 400MHz of occupied bandwidth and dramatically improves PA energy efficiency while meeting spectral emission masks with margin. The PIMC block cancels passive intermodulation products in the uplink paths to improve receiver sensitivity and relax the specification of expensive RF filters. The DUC/DDC supports up to eight component carriers per transmit and receive path.

The Low-PHY baseband processor supports 4G, 5G, and NB-IoT air interfaces, including uplink PRACH processing. It can process up to eight component carriers (CC) per transmit and receive path and it is software configurable for different modes and parameters, including dynamic spectrum sharing (DSS), bandwidth parts, mixed numerology, and windowing.

Sierra supports an O-RAN fronthaul Split Option 7.2x Category A interface with up to four 10 or 25Gbit/s Ethernet interfaces.

Sierra integrates an embedded CPU for system control. The CPU is an integrated quad-core Arm® A53 processor with Neon™ extensions. Each Arm® core has 1MB of internal SRAM and has access to an additional 8GB of external DRAM through a DDR controller.

For more information on the Sierra RF Radio SoC or MaxLIN DPD linearization technology, visit:

- www.maxlinear.com/sierra
- www.maxlinear.com/maxlin

About MaxLinear, Inc.

MaxLinear, Inc. (Nasdaq: MXL) is a leading provider of radio frequency (RF), analog, digital, and mixed-signal integrated circuits for access and connectivity, wired and wireless infrastructure, and industrial and multimarket applications. MaxLinear is headquartered in Carlsbad, California. For more information, please visit https://www.maxlinear.com/.

Cautionary Note About Forward-Looking Statements

This press release contains “forward-looking” statements within the meaning of federal securities laws. Forward-looking statements include, among others, statements concerning or implying future financial performance, anticipated product performance and functionality of our products or products incorporating our products, statements relating to MaxLinear’s Sierra, O-RAN RUs or MaxLIN solutions and the functionality, performance and the benefits of use of such products. 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 these new and existing products will affect our future revenues or financial performance. Forward-looking statements are based on management’s current, preliminary expectations and are subject to various risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Forward-looking statements may contain words such as “will be,” “will,” “expected,” “anticipate,” “continue,” or similar expressions and include the assumptions that underlie such statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: risks relating to the development, testing, and commercial introduction of new products and product functionalities; risks relating to our terminated merger with Silicon Motion and related arbitration and class action complaint and the risks related to potential payment of damages; the effect of intense and increasing competition; impacts of global economic conditions; the cyclical nature of the semiconductor industry; a significant variance in our operating results and impact on volatility in our stock price, and our ability to sustain our current level of revenue, which has previously declined, and/or manage future growth effectively, and the impact of excess inventory in the channel on our customers’ expected demand for certain of our products and on our revenue; the geopolitical and economic tensions among the countries in which we conduct business; increased tariffs, export controls or imposition of other trade barriers; our ability to obtain or retain government authorization to export certain of our products or technology; risks associated with international geopolitical and military conflicts; risks related to the loss of, or a significant reduction in orders from major customers; costs of legal proceedings or potential violations of regulations; information technology failures; a decrease in the average selling prices of our products; failure to

penetrate new applications and markets; development delays and consolidation trends in our industry; inability to make substantial research and development investments; delays or expenses caused by undetected defects or bugs in our products; substantial quarterly and annual fluctuations in our revenue and operating results; failure to timely develop and introduce new or enhanced products; order and shipment uncertainties; failure to accurately predict our future revenue and appropriately budget expenses; lengthy and expensive customer qualification processes; customer product plan cancellations; failure to maintain compliance with government regulations; failure to attract and retain qualified personnel; any adverse impact of rising interest rates on us, our customers, and our distributors and related demand; risks related to compliance with privacy, data protection and cybersecurity laws and regulations; risks related to conforming our products to industry standards; risks related to business acquisitions and investments; claims of intellectual property infringement; our ability to protect our intellectual property; risks related to security vulnerabilities of our products; use of open source software in our products; and failure to manage our relationships with, or negative impacts from, third parties.

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