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RFHIC and MaxLinear Achieve Breakthrough Linearization Performance for Ultra-Wideband 5G New Radio

MaxLinear transceivers and linearization technology combine with RFHIC's power amplifiers to exceed 3GPP requirements for 5G New Radio (NR)

CARLSBAD, Calif. & ANYANG, South Korea--(BUSINESS WIRE)-- MaxLinear, Inc. (NYSE: MXL), a leading provider of radio frequency (RF), analog, digital and mixed-signal integrated circuits, and RFHIC (KOSDAQ: 218410), a leader in the design and manufacture of high-performance active RF and microwave components and hybrid modules recently verified that RFHIC's Gallium Nitride (GaN) transistor for 5G macro base stations and hybrid power amplifier module (PAM) for 5G massive MIMO base stations achieved breakthrough linearization performance when combined with MaxLinear's MaxLIN linearization technology, exceeding 3rd Generation Partnership Project (3GPP) requirements for ultra-wideband 5G New Radio (5G NR).

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20210810005390/en/

MaxLinear transceivers and linearization technology combine with RFHIC's power amplifiers to exceed 3GPP requirements for 5G New Radio (NR) (Graphic: Business Wire)

RFHIC and MaxLinear are collaborating to optimize the combined performance of power amplifiers, transceivers, and linearization at key 5G bands (3.4 to 3.8GHz and 3.7 to 3.98GHz). The collaboration entails RFHIC's highly efficient GaN solutions for 5G telecom infrastructure, MaxLinear's high-performance transceivers, and MaxLinear's ultra-wideband linearization solution (MaxLIN), achieving outstanding efficiency and linearity performance.

MaxLinear's transceiver portfolio includes:

- MxL16xx, a 4T4R family supporting full wideband with 400MHz of instantaneous bandwidth (IBW) for a wide variety of Macro and small cell applications
- MxL155x, a high density 8T8R family supporting full wideband with 400MHz of instantaneous bandwidth (IBW) optimized for high antenna count massive MIMO applications

These transceivers are software compatible, creating a single platform solution that customers can leverage for any application. By providing the transceiver and the linearization solution, along with test data that includes the full transmit lineup, MaxLinear customers can move quickly to production without performance surprises.

RFHIC's GaN transistors for 5G macro base stations, ID36411D operating at 3.4 to 3.8GHz and ID38411DR operating at 3.7 to 3.98GHz, are designed to achieve the highest efficiency with 100MHz, 200MHz, and 300MHz IBW. The ID36411D achieves over 47% power efficiency for the average output power of 47.41dBm (55W). MaxLIN improves linearity by over 25dB to exceed 3GPP and Federal Communications Commission (FCC) requirements with margin.

"Our GaN power amplifier solution will accelerate the size reduction of 5G base station equipment because of its outstanding power efficiency and high integration. Also, its breakthrough wide bandwidth performance will enable one radio unit to support multiple wireless service providers," said Sam Kim, Vice President at RFHIC.

"Combining RFHIC technology with MaxLinear transceivers and MaxLIN ultra-wideband linearization provides the highest performance solution available on the market for wideband use cases, such as the crucial C-Band which was recently auctioned in the U.S.," said Helen Kim, Vice President of MaxLinear's Wireless Technologies & IP. "With our automated lineup optimization tool, we can quickly customize the full transmit line-up and provide our customers a market-ready solution in days, rather than months."

The collaboration of RFHIC and MaxLinear will support all global sub-6GHz 5G spectrums and contribute to the continued innovation of both conventional base station equipment and O-RAN technology.

To learn more about RFHIC and its products, please visit www.rfhic.com. To learn more about MaxLinear and its products, please visit www.maxlinear.com

About MaxLinear, Inc.

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

About RFHIC, Inc.

RFHIC Corporation is a leader in the design and manufacture of high-performance active RF & Microwave components and hybrid modules for telecom infrastructures, defense industries, and customized solutions. RFHIC Corporation is headquartered in Anyang, South Korea and its US Corporation is in Morrisville, NC. For more information, please visit www.rfhic.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, and industry trends and growth opportunities affecting MaxLinear, in particular statements relating to MaxLinear’s ultra-wideband linearization solution (MaxLIN) and MxL155x and MxL16xx 400MHz transceivers, current or future benefits of collaboration with RFHIC Corporation, functionality, integration, interoperability, performance, and the benefits of use of such products and technologies. 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 or 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,” “expect,” “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: intense competition in our industry and product markets; risks relating to the development, testing, and commercial introduction of new products and product functionalities; the ability of our customers to cancel or reduce orders; and uncertainties concerning how end user markets for our products will develop. Other risks potentially affecting our business include risks relating to acquisition integration; our lack of long-term supply contracts and dependence on limited sources of supply; potential decreases in average selling prices for our products; impacts from public health crises such as the Covid-19 pandemic or natural disasters; and the potential for 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 arising from other factors affecting the business, operating results, and financial condition of MaxLinear, including those set forth in MaxLinear’s most recent Annual Report on Form 10-K for the year ended December 31, 2020 and Quarterly Report on Form 10-Q for the quarter ended June 30, 2021, in each case as filed with the Securities and Exchange Commission. 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.

Forward Looking Statements:

This press release contains forward-looking statements involving risks and uncertainties, both known and unknown, that may cause actual results to differ materially from those indicated. Actual results may differ materially due to a number of factors, including the risk that we may be unable to manufacture these new products with sufficiently low cost to offer them at competitive prices or with acceptable margins; the risk we may encounter delays or other difficulties in ramping up production of our capacity to supply these products; customer acceptance of our products; the rapid development of new technology and competing products that may impair demand or render RFHIC's products obsolete; and other factors discussed in RFHIC's filings with the Korean Stock Exchange Commission, including its report on Form 10-K for the year ended June 28, 2020, and subsequent filings.

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