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MaxLinear's MxL7704 PMIC Powers the Raspberry Pi 4

- *Raspberry Pi has selected the MxL7704 Five-Output Universal Power Management IC to power their new single-board computer, the Raspberry Pi 4*

CARLSBAD, Calif.--(BUSINESS WIRE)-- MaxLinear, Inc. (NYSE: MXL), a leading provider of radio frequency (RF), analog and mixed-signal integrated circuits for the connected home, wired and wireless infrastructure, and industrial and multimarket applications, today announced that Raspberry Pi has selected the MxL7704 Universal PMIC to power its latest single-board computer, the Raspberry Pi 4.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20190624005206/en/

Raspberry Pi 4 (Photo: Business Wire)

The MxL7704 complete power delivery system already powers the popular Raspberry Pi 3 Model B+. The versatility of this universal PMIC allowed it to be easily re-programmed to accommodate the new current limit, sequencing and power requirements of the upgraded SoC and surrounding ICs on-board the new Raspberry Pi 4.

The highly integrated MxL7704 provides all key power rails required by the Raspberry Pi 4, including the low noise voltage rail used for audio circuitry. It also handles the unique power sequencing requirements of each rail with ease due to its convenient I2C programmability. The MxL7704's I2C interface communicates with the computer's SoC for dynamic voltage scaling, status monitoring, sequencing control and PGOOD routing. These features enable the Raspberry Pi 4 to save power by dynamically reducing the voltage to the SoC when the system is idle and boosting it when

the processor is running at maximum speed.

The MxL7704 includes four synchronous step-down buck regulators that provide system, memory, I/O and core power from 1.5A to 4A. An on-board 100mA LDO provides clean 1.5V to 3.6V power for analog sub-systems. It also features an integrated 8-bit ADC with 2 external inputs and temperature sensor that provide die temperature monitoring, telemetry and additional flexibility. The Raspberry Pi 4 utilizes the MxL7704's on-board ADC to determine if there is a high current delivery USB power supply. All these features are packed into a small 5x5mm 32-pin QFN package, which helps the Raspberry Pi retain its small form factor.

"The MxL7704 provides five rails pre-optimized for ease of use in single-board computer systems," said James Lougheed, Vice President of Marketing for MaxLinear's High Performance Analog Products. "The PMIC includes a host of features that allow monitoring, telemetry and additional flexibility. These unique features provide the Raspberry Pi 4 with knowledge and control of power status and efficiency to ensure peak performance during various operating conditions."

"After using the MxL7704 very successfully on the Raspberry Pi 3 Model B+, we were very pleased to select it again to power our next generation Raspberry Pi 4 Model B computer," said James Adams, Chief Operating Officer for Raspberry Pi (Trading) Ltd. "The combination of highly efficient, high current buck supplies in a very cost-effective package which also included I2C control, dynamic voltage scaling, programmable sequencing as well as a low noise LDO and ADC has been key to making sure we have met our design and cost targets for Raspberry Pi 4."

For more information visit www.maxlinear.com/mxl7704.

About MaxLinear, Inc.

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

About Raspberry Pi

The Raspberry Pi Foundation is a UK-based charity that works to put the power of digital making into the hands of people all over the world, so they are capable of understanding and shaping our increasingly digital world, able to solve the problems that matter to them, and equipped for the jobs of the future.

We provide low-cost, high-performance computers that people use to learn, solve problems and have fun. We provide outreach and education to help more people access computing and digital making. We develop free resources to help people learn about computing and how to make things with computers, and train educators who can guide other people to learn.

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, and industry trends and growth opportunities affecting MaxLinear, in particular statements relating to MxL7704, including but not limited to potential market opportunities, functionality, and the benefits of use of MxL7704. 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 the availability of our MxL7704 product 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: 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; 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; 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 identified in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019. 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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