



Adesto's EcoXiP™ Solution Improves XiP Performance, Reduces Power and Cost for NXP's New Crossover Embedded Processors

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EcoXiP Enables Designers to Optimize NXP i.MX RT1050 with No On-board Flash

SANTA CLARA, Calif., Nov. 29, 2017 (GLOBE NEWSWIRE) -- Adesto Technologies (NASDAQ:IOTS), a leading provider of application-specific, ultra-low power non-volatile memory products, today announced its EcoXiP™ family of products, paired with NXP® Semiconductor's new i.MX RT1050 microcontroller, provide embedded system designers the lowest power, lowest latency XiP system operation available today. EcoXiP, eXecute-in-Place (XiP) memory, more than doubles processor performance, lowers system power consumption and reduces system cost compared to standard serial peripheral interface (SPI) devices.

NXP engineers designed the i.MX RT1050 with no on-board Flash to increase performance and reduce total solution cost. "Shedding the burden of on-board flash reduces costs and helps enable higher frequency operation for increased processor performance and enables product designers to boost capabilities, increase efficiency and add more features," said Joe Yu, VP, GM Low-Power MPU and LPC MCU Product Line at NXP Semiconductors. "NXP's Crossover i.MX RT1050 with an Arm Cortex-M7 core is designed to run up to 600MHz (3036.50 CoreMark score) and coupled with the low-power, external memory such as Adesto's EcoXiP can help address customers performance and cost requirements."

The new crossover embedded processors are aimed at consumer, industrial, IoT and other applications that demand the performance and capabilities of an applications processor-based design, but with the ease-of-use, low-power, and real-time operation of a microcontroller system. The addition of XiP memory also provides these systems the ability to perform over-the-air (OTA) updates, a requisite function for many end devices.

Until now, for XiP systems to hit these performance targets, designers have been required to invest in memory solutions that are expensive, power-hungry and performance limiting. Built on an innovative memory and protocol architecture, EcoXiP overcomes these challenges.

"The introduction of low power XiP systems will pave the way for applications that need better energy efficiency and lower cost," said Gideon Intrater, Adesto's Chief Technology Officer. "The NXP RT1050 is the first MCU to take full advantage of the efficiencies and performance benefits that our EcoXiP memory can offer. We're excited to demonstrate the advantages that our collaboration offers to system designers."

The EcoXiP Advantage

Benefits of EcoXiP include:

- High system performance: EcoXiP delivers 2.4X CPU performance compared to existing quad devices and 1.4X CPU performance compared to best-in-class octal devices
- Optimized latency and throughput: a high-speed, octal DDR interface with a proprietary pre-fetching scheme reduces the effective latency dramatically and delivers superior CPU performance
- Concurrent Read/Write capability: designers can reduce system cost since in most cases there is no need for an additional Flash device to handle over-the-air updates or data logging
- Memory size flexibility: optimized densities from 32Mb to 128Mb enable IoT SoC designers to optimize for their specific application, with the ability to change memory capacity as their needs change without the expense of redesigning their SoCs
- Best standby power: configurable strength IO pins and a range of power management features lead to improved device and system power consumption
- Enhanced security with on-chip unique-ID One-Time Programmable (OTP) security registers

Adesto will demonstrate the collaborative advantages of the RT1050 with EcoXiP memory at the Embedded Systems Conference in San Jose, CA on December 6-7, 2017. Samples of Adesto's EcoXiP are available now.

About Adesto Technologies

Adesto Technologies (NASDAQ:IOTS) is a leading provider of application-specific, ultra-low power, smart non-volatile memory products. The company has designed and built a portfolio of innovative products with intelligent features to conserve energy and enhance performance, including Fusion Serial Flash, DataFlash®, EcoXiP™ and products based on its trademark resistive RAM technology called Conductive Bridging RAM (CBRAM®).

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