

# Create Cloud-Connected Embedded Systems with Microchip Technology and Amazon Web Services' Expanded Offerings

**Microchip's robust portfolio and toolchain, with support for Amazon FreeRTOS, AWS Greengrass and AWS IoT enables the creation of connected designs with enhanced security**

CHANDLER, Ariz., Nov. 29, 2017 (GLOBE NEWSWIRE) -- Cloud-connected systems are becoming increasingly important across a wide range of industries. From agriculture to smart cities and consumer to industrial, real-time accessibility to systems and data is a game-changing element for these industries, accelerating both the pace and efficiency of business. To enable the creation of these smart designs, Microchip Technology Inc. (NASDAQ:MCHP) has expanded its collaboration with Amazon Web Services (AWS) to support cloud-connected embedded systems from the node to the cloud. Supporting Amazon Greengrass, Amazon FreeRTOS and AWS Internet of Things (IoT), Microchip provides all the components, tools, software and support needed to rapidly develop secure cloud-connected systems. For more information on Microchip's latest solutions for AWS platforms, visit: <http://www.microchip.com/design-centers/internet-of-things/aws-iot>.

Microchip's PIC32MZ EF series of microcontrollers (MCUs) now support Amazon FreeRTOS, an Operating System (OS) that makes compact low-powered edge devices easy to program, deploy, secure and maintain. These high-performance MCUs incorporate industry-leading connectivity options, ample Flash memory, rich peripherals and a robust toolchain which empower embedded designers to rapidly build complex applications. Amazon FreeRTOS includes software libraries which make it easy to securely deploy over-the-air updates as well as the ability to connect devices locally to AWS Greengrass or directly to the cloud, providing a variety of data processing location options.

For systems requiring data collection and analysis at a local level, developers can use Microchip's SAMA5D2 series of microprocessors (MPUs) with integrated AWS Greengrass software. This will enable systems to run local compute, messaging, data caching and sync capabilities for connected devices in a secure way. This type of execution provides improved event response, conserves bandwidth and enables more cost-effective cloud computing. The SAMA5D2 devices, also available in System-in-Package (SiP) variants, offer full Amazon Greengrass compatibility in a low-power, small form factor MPU targeted at industrial and long-life gateway and concentrator applications. Additionally, the integrated security features and extended temperature range allows these MPUs to be deployed in physically insecure and harsh environments.

In any cloud-connected design, security and ease of use are vital pieces of the puzzle. Microchip's ATECC608A CryptoAuthentication device enables enhanced system security as

well as easy-to-use registration. The secure element provides a unique, trusted and protected identity to each device that can be securely authenticated to protect a brand's intellectual property and revenue. In addition to enhancing system security, the ATECC608A allows AWS customers to instantly connect to the cloud through the device's Just-in-Time-Registration (JITR) powered by AWS IoT.

"There is no one-size-fits-all approach to developing cloud-connected systems," said Sumit Mitra, vice president of Microchip's 32-bit MCU, MPU and wireless business units. "By supporting multiple AWS services with a variety of products we're giving designers the flexibility to choose the parts and platforms that best meet their system needs while providing the tools and support to mitigate their design risk."

"The ability to make data-driven, real-time decisions is an integral part of the current business landscape," said Satyen Yadav, General Manager of AWS IoT, Amazon Web Services, Inc. "Microchip's integration of Amazon FreeRTOS, AWS Greengrass and the AWS IoT service allows customers to leverage the benefits of AWS with the scalability to find an implementation attuned to their design."

### **Development Tools**

Microchip has an extensive toolchain for rapid and reliable development. The Curiosity PIC32MZ EF development board, to kick-start Amazon FreeRTOS-based designs, is a fully integrated 32-bit development platform which also includes two mikroBUS expansion sockets, enabling designers to easily add additional capabilities, such as Wi-Fi® with the WINC1510 click board, to their designs. The SAMA5D2 Xplained Ultra board, which can be used for AWS Greengrass designs, is a fast prototyping and evaluation platform for the SAMA5D2 series of MPUs. Additionally, the CryptoAuth Xplained Pro evaluation and development kit is an add-on board for rapid prototyping of secure solutions on AWS IoT and is compatible with any Microchip Xplained or XplainedPro evaluation boards. AWS is also a part of Microchip's Design Partner Program which provides technical expertise and cost-effective solutions in a timely manner.

### **Pricing and Availability**

All products mentioned in this release are available now for sampling and in volume production.

- PIC32MZ EF MCUs are available starting at \$5.48 each in 10,000 unit quantities.
- The PIC32MZ EF Curiosity board (DM320104) is available for \$47.99 each.
- SAMA5D2 MPUs are available starting at \$4.42 each in 10,000 unit quantities.
- The SAMA5D2 Xplained Ultra board (ATSAMA5D2C-XULT) is available for \$150 each.
- ATECC608A secure elements are available starting at \$0.56 each in 10,000 unit quantities.
- The CryptoAuth Xplained Pro evaluation and development kit (ATCryptoAuth-XPRO-B) is available for \$10 each.

For additional information, contact any Microchip sales representative or authorized worldwide distributor. To purchase products mentioned in this press release, go to Microchip's easy-to-use online sales channel [microchipDIRECT](#) or contact one of Microchip's authorized distribution partners.

### **About Microchip Technology**

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, providing low-risk product development, lower total

system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at [www.microchip.com](http://www.microchip.com).

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Source: Microchip Technology Incorporated