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Create Secured IoT Endpoints with the First 32-bit MCU to Feature Robust, Chip-level Security and Arm TrustZone Technology

New MCUs combine industry's best-in-class low power consumption and water-tolerant, noise-immune capacitive touch

CHANDLER, Ariz., June 25, 2018 (GLOBE NEWSWIRE) -- With the booming growth of Internet of Things (IoT) endpoints, security is sometimes an afterthought for many designers, increasing the risk of exposing intellectual property (IP) and sensitive information. To address the growing need for security, the new SAM L10 and SAM L11 MCU families are now available from Microchip Technology Inc. (NASDAQ:MCHP). For more information visit www.microchip.com/SAML11.

The new MCU families are based on the Arm® Cortex®-M23 core, with the SAM L11 featuring Arm TrustZone® for Armv8-M, a programmable environment that provides hardware isolation between certified libraries, IP and application code. Microchip enables robust security by including chip-level tamper resistance, secure boot and secure key storage that, when combined with TrustZone technology, is designed to protect customer applications from both remote and physical attacks.

Both MCU families offer the industry's lowest power consumption, as well as have capacitive touch capability with best-in-class water tolerance and noise immunity. When benchmarked for power consumption the SAM L10 received a ULPMark™ score of 405, which is over 200 percent better performance than nearest competitor certified by EEMBC®, the Embedded Microprocessor Benchmark Consortium. Microchip uses proprietary picoPower® technology to provide industry-leading low power consumption in active and all sleep modes.

"IoT end points often require low power and high security," said Rod Drake, vice president of Microchip's MCU32 business unit. "However, the growth of IoT nodes is happening so fast that security is not always addressed. The features of the SAM L11 are exactly what customers need to plan for security early in the design cycle."

In addition to TrustZone technology, the SAM L11 security features include an on-board cryptographic module supporting Advanced Encryption Standard (AES), Galois Counter Mode (GCM) and Secure Hash Algorithm (SHA). The secure boot and secure key storage with tamper detection capabilities establish a hardware root of trust. It also offers secure bootloader for secure firmware upgrades. Microchip has partnered with Trustonic, a member of Microchip's Security Design Partner Program, to offer a comprehensive security solution framework that simplifies implementation of security and enables customers to introduce end products faster. Microchip has also partnered with Secure Thingz and Data I/O Corporation

to offer secure provisioning services for SAM L11 customers that have a proven security framework.

Both MCU families offer Microchip's latest-generation Peripheral Touch Controller (PTC) for capacitive touch capabilities. Designers can easily add touch interfaces that provide an impressively smooth and efficient user experience in the presence of moisture and noise while maintaining low power consumption. The touch interface makes the devices ideal for a myriad of automotive, appliance, medical and consumer Human Machine Interface (HMI) applications.

Development Support

The SAM L10 and SAM L11 Xplained Pro Evaluation Kits are available to kick-start development. All SAM L10/L11 MCUs are supported by the Atmel Studio 7 Integrated Development Environment (IDE), IAR Embedded Workbench, Arm Keil® MDK as well as Atmel START, a free online tool to configure peripherals and software that accelerates development. START also supports TrustZone technology to configure and deploy secure applications. A power debugger and data analyzer tool is available to monitor and analyze power consumption in real time and fine tune the consumption numbers on the fly to meet application needs. Microchip's QTouch® Modular Library, 2D Touch Surface Library and QTouch Configurator are also available to simplify touch development.

Pricing and Availability

SAM L10 and SAM L11 devices are available today in a variety of pin counts and package options in volume production quantities.

- Devices in the SAM L10 series are available starting at \$1.09 each in 10,000-unit quantities.
- Devices in the SAM L11 series are available starting at \$1.22 each in 10,000-unit quantities.
- The SAM L10 and SAM L11 Xplained Pro Evaluation Kits are available for \$58.00 each (DM320204 and DM320205 respectively).

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

Resources

High-res images available through Flickr or editorial contact (feel free to publish):

- Application image: www.flickr.com/photos/microchiptechnology/41260682354/sizes/l
- Chip graphic: www.flickr.com/photos/microchiptechnology/41260684014/sizes/l
- Videos available through YouTube or editorial contact [here](#) and [here](#).

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.

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