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Industry’s First Microcontroller Integrated with a Robust Secure Subsystem and Arm® TrustZone® Technology

Microchip releases Arm Cortex®-M23 based microcontroller supported with secure key provisioning solutions

CHANDLER, Ariz., May 26, 2022 (GLOBE NEWSWIRE) -- Security threats are growing in complexity and causing product development challenges in the Internet of Things (IoT), consumer, industrial, medical and other markets. It is imperative that these products have strong embedded security while also offering low power consumption for longer battery life. Microchip Technology Inc. **(Nasdaq: MCHP)** today announces the release of the industry's first microcontroller (MCU) to combine a secure subsystem and Arm® TrustZone® technology in a single package. The **PIC32CM LS60**, which integrates Microchip's Trust Platform secure subsystem, makes it easier to develop end products using one microcontroller rather than two or more semiconductor chips. Now, designers can go to one trusted source to find a 32-bit MCU that is designed to protect products and the end user from remote or physical attacks on their smart home devices, smartphone or tablet accessories, portable medical devices, wearables, connected appliances and industrial robots.

As the IoT industry continues to grow rapidly, the need for the edge devices to be secured with high standards of protection has become essential. The PIC32CM LS60, with its combination of easy-to-use Arm TrustZone technology and the Common Criteria Joint Interpretation Library (JIL) “high” rated Trust Platform secure subsystem, enables developers to implement industry-proven security practices and countermeasures to protect against a wide class of known remote and physical attacks. These types of designs are supported with tools such as MPLAB® Code Configurator (MCC) TrustZone Manager and the Trust Platform Design Suite to simplify the configuration of the secure subsystem. The Microchip Trust Platform provisioning service is available to securely provision keys and certificates.

“With its integration of Arm TrustZone technology and Microchip’s secure subsystem in one package, the PIC32CM LS60 is an offering that the market hasn’t seen before,” said Rod Drake vice president of Microchip Technology’s 32-bit MCU business unit. “We believe this MCU’s security, ease of use and low-power operation will be a powerful shift in implementing advanced security technology in IoT applications.”

With the increased adoption of touch capabilities in waterproof wearables and modern appliances, embedded designers are challenged with developing touch interfaces that work well in noisy and moist environments. The PIC32CM LS60 integrates an enhanced peripheral touch controller with the Driven Shield Plus feature that prevents false touches due to moisture and provides high immunity to noise to enable exceptional touch interfaces.

In addition, the device features core-independent SleepWalking peripherals and the Event System. These peripherals keep the MCU core in sleep mode for extended periods to reduce power consumption. It also comes with on-chip analog that includes operational amplifiers (op amps), digital-to-analog converters (DACs) and analog-to-digital converters (ADCs) that can be operated in sleep modes and interfaced with a variety of sensors. The PIC32CM LS60 is compatible with the MPLAB Data Visualizer and Power Debugger tools that can be used to monitor, analyze, and fine tune power consumption numbers in real-time. This makes it easier for customers to develop low-power applications and release extended-battery-life products to market faster.

Development Tools
Microchip offers the following development tools and services to support the PIC32CM LS60 and its variants: Trust Platform Provisioning Service, Trust Platform Design Suite (TPDS), MPLAB Harmony v3 platform with MPLAB Code Configurator for Arm TrustZone, Touch Library, Touch Configurator, MPLAB Data Visualizer, Power Debugger, PIC32CM LE00 Curiosity Pro Evaluation Kit, PIC32CM LS00 Curiosity Pro Evaluation Kit, PIC32CM LS60 Curiosity Pro Evaluation Kit, PIC32CM LE00 Ultra-Low-Power, Water-Tolerant Touch Reference Design, MPLAB X Integrated Development Environment (IDE) and its ecosystem of debuggers, programmers and compilers.

Availability
In addition to the PIC32CM LS60 secure variant, a PIC32CM LE00 general-purpose variant and a PIC32CM LS00 Arm TrustZone technology variant (without secure subsystem) are also available. The PIC32CM5164LS60, PIC32CM5164LS00 and PIC32CM5164LE00 are available today in 10,000 units for the 100-pin TQFP package and are priced at $5.48, $4.33 and $4.18, respectively. For additional information or to purchase, contact a Microchip sales representative or visit Microchip's Purchasing and Client Services website, **www.microchipdirect.com**.

Resources
High-res images available through Flickr (feel free to publish):

- Application image: **www.flickr.com/photos/microchiptechnology/51981458537/sizes/l/**

About Microchip Technology
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. 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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