MICROCHIP

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PSA Certified Spotlight
Microchip Technology Inc.

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level one

SAM L11-KPH MCU, SAM L11 MCU

IoT Drives New Power and Performance Requirements

By combining ultra-low power consumption with Arm TrustZone security technology, Microchip MCUs SAM L11 and SAM L11-KPH let manufacturers develop low-power, secure IoT devices. Now PSA Certified means that manufacturers of products, ranging from secure wireless keypads to medical devices that hold patient data, can use Microchip MCUs to mass produce secure IoT products.

Microchip Technology Inc. is a leading leading provider of smart, connected, and secure embedded control solutions for the industrial, automotive, consumer, aerospace and defense, communications, and computing markets. Its 32-bit SAM L11 microcontroller is based on the Arm Cortex-M23, ideal for securing IoT nodes for smart cities, home automation, smart agriculture, and asset tracking applications. Increasingly, these applications and systems need to connect, making them more vulnerable to security risks than ever before.

"Previously, the thermostat in your home would just regulate the temperature," says Anand Rangarajan, product marketing manager at Microchip Technology. "Now, that thermostat is controlled by your Wi-Fi and can be operated by your mobile phone. it makes your life easy, but it also provides a platform for hackers to connect and attack your resources, as well as the resources of enterprises and others."

Secure IoT Data and Interfaces

Microchip customers typically choose SAM L11 for in-home applications, such as thermostats and baby monitors, but also for utility meters and medical devices, where IP protection and interfaces is even more critical. Most of these device manufacturers know they need security, but many don't fully understand how to include it, preferring the silicon supplier to provide an end-to-end security solution, which they can integrate.

To address this need, Microchip chose to certify its microcontroller for security, based on the PSA Certified program that provides security guidelines and standards for the entire IoT environment.

"Prior to the PSA Certified program, the only way for us to offer certified security in the IoT space was to have the product certified using a standard that wasn't made specifically for IoT, which creates an apples-to-oranges comparison" Rangarajan says, "PSA Certified means we can align ourselves to a standard specifically for IoT use cases, so it is a very helpful apples-to-apples comparison."

"PSA Certified is something that lets us qualify our statements and validates our security assertions. That is very powerful because as PSA Certified gains traction, we're already ahead with industry-leading security our customers can trust."

Anand Rangarajan, Product Marketing Manager, Microchip Technology

As more and more IoT devices go online, more customers are starting conversations around security certification. Microchip is embracing the PSA Certified process for SAML11 as well as exploring other applicable certification mechanisms.

"PSA Certified is something that lets us qualify our statements and validates our security assertions," Rangarajan adds. "That is very powerful because as PSA gains traction, we're already ahead with industry-leading security our customers can trust."