Cypress Processing Solution with Built-in System Layer Security Fortifies IoT Application Design

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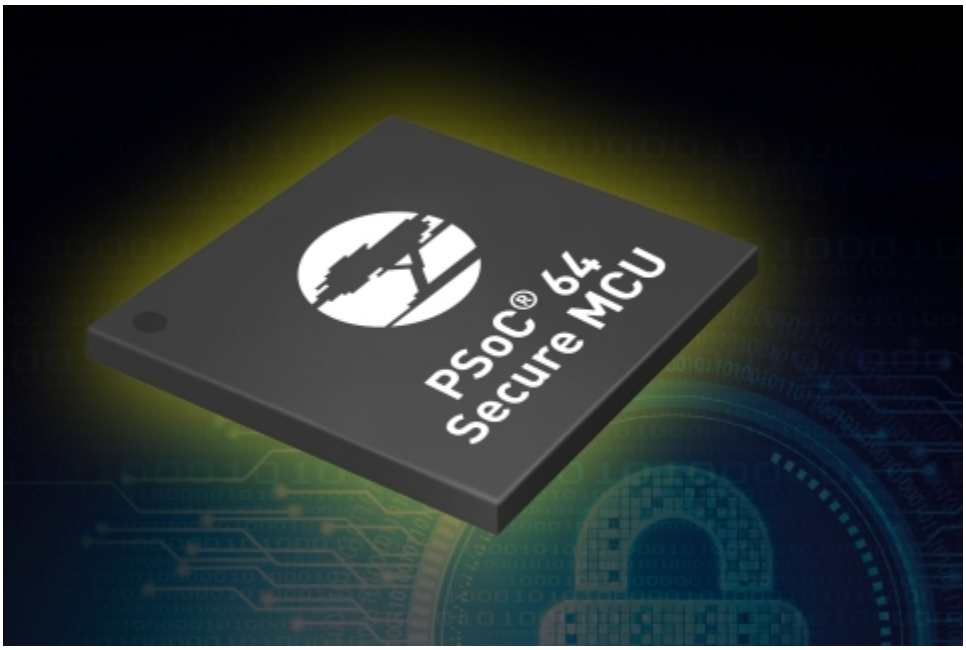
New Line of PSoC® 64 Secure MCUs Provides PSA Certified™ Security

NUREMBERG, Germany--(BUSINESS WIRE)--Feb. 26, 2019-- EMBEDDED WORLD—Cypress Semiconductor Corp. (NASDAQ: CY), the embedded solutions leader, today announced a new line of its PSoC® 6 microcontrollers (MCUs) designed to give Internet of Things (IoT) designers confidence in the security of their applications. The new PSoC 64 Secure MCUs integrate robust, standards-based system layer security software with the hardware layer features available in the ultra-low-power PSoC 6 architecture. Specifically, PSoC 64 Secure MCU devices provide an isolated root-of-trust with true attestation and provisioning services. In addition, the line includes devices that deliver a pre-configured secure execution environment supporting the system software of various IoT platforms, providing TLS authentication, secure storage, and secure firmware management. The MCUs also include a rich execution environment for application development, with an embedded RTOS from Cypress' ModusToolbox™ suite that manages communication with the secure execution environment.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20190226005439/en/



Pictured is Cypress Semiconductor's PSoC 64 Secure MCU, which integrates robust, standards-based system layer security software with the hardware layer features available in the ultra-low-power PSoC 6 architecture. (Photo: Business Wire)

PSoC 64 Secure MCUs are one of the first Arm® Cortex®-M processors to be certified as Level 1 compliant within the Arm Platform Security Architecture (PSA) certification scheme, PSA Certified™, utilizing a secure Trusted Firmware-M (TF-M) implementation integrated into the Arm® Mbed™ OS open-source embedded operating system. Combined with the Arm PSA holistic set of threat models, security analyses, and hardware and firmware architecture specifications, designers can use PSoC 64 Secure MCUs with confidence in their secure applications. The line is ideal for cloud-connected products that require protection of user data and trustworthy firmware updates, including personal healthcare devices, medical and chronic disease management equipment, and home security solutions. More information on the line of PSoC 64 Secure MCUs is available at www.cypress.com/psoc6security.

"User privacy and data protection are becoming ever more critical for IoT devices, especially with governments around the world passing new legislation to protect the public," said Sudhir Gopalswamy, executive vice president of the Microcontrollers and Connectivity Division at Cypress. "Designing secure IoT devices is not easy—it requires skills spanning the application, system, and hardware layers of an embedded system—but by pre-integrating the system security software into our PSoC 64 Secure MCUs, Cypress provides a trustworthy platform that allows designers to focus on their end-product differentiation."

"In a world of a trillion connected devices, trust is essential, and it's our industry's responsibility to enable this trust," said Paul Williamson, vice president and general manager, Emerging Business Group at Arm. "PSA Certified enables IoT solution developers and device makers to verify their solutions have been designed with a secure foundation, in line with PSA principles. Using Arm Mbed™ OS and Trusted Firmware, Cypress is among the first of our partners to deliver a Level 1 PSA Certified solution with the PSoC 64 Secure family."

The line of PSoC 64 Secure MCUs is supported in Cypress' ModusToolbox™ suite, which will allow designers to select the system firmware of secure IoT platforms—such as Amazon Web Services (AWS), Arm Pelion™ and Alibaba—to develop their application, and then configure and verify the secure boot images. The MCUs include a hardware-based root-of-trust consisting of secured storage and firmware, establishing a command-based set of trusted services. The root-of-trust includes hardware accelerated cryptography, as well as true random number generation (TRNG). The ModusToolbox suite brings best-in-class connectivity, processing, sensing, and security together in a unified environment, providing open access to third-party solutions, freeing engineers to focus on delivering high-value, differentiated products.

Cypress' IoT Portfolio at Embedded World

Cypress is demonstrating its PSoC 64 Secure line of MCUs, along with its complete embedded systems solution portfolio, here at the Embedded World 2019 trade show in hall 4A, stand 148 of the Nuremberg Exhibition Center from February 26-28.

About PSoC 6 MCUs

The PSoC 6 architecture is built on an ultra-low-power 40-nm process technology, and the MCUs feature low-power design techniques to extend battery life up to a full week for wearables. The dual-core Arm® Cortex®-M4 and Cortex®-M0+ architecture lets designers optimize for power and performance simultaneously. Designers can use the MCU's software-defined peripherals to create custom analog front-ends (AFEs) or digital interfaces for innovative system components such as electronic-ink displays. The PSoC 6 MCU features the latest generation of Cypress' industry-leading CapSense® capacitive-sensing technology, enabling modern touch and gesture-based interfaces that are robust and reliable.

Availability

Cypress' PSoC 64 Secure MCUs with SecureBoot will be sampling the first quarter of 2019, and additional variations are planned for the second quarter of 2019.

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About Cypress

Cypress is the leader in advanced embedded system solutions for the world's most innovative automotive, industrial, smart home appliances, consumer electronics and medical products. Cypress' microcontrollers, wireless and USB-based connectivity solutions, analog ICs, and reliable, high-performance memories help engineers design differentiated products and get them to market first. Cypress is committed to providing customers with the best support and development resources on the planet enabling them to disrupt markets by creating new product categories in record time. To learn more, go to www.cypress.com.

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