Gecko Microcontrollers Get a Big Boost in Security, Memory and Peripherals

-- Create Secure, Feature-Rich and Battery-Friendly IoT Devices with Silicon Labs' New EFM32™ Jade and Pearl MCUs --

NUREMBERG, Germany, March 14, 2017 /PRNewswire/ -- (Embedded World) – Silicon Labs (NASDAQ: SLAB) continues to enhance the EFM32™ Gecko microcontroller (MCU) family to meet the needs of embedded developers designing the next generation of secure, sophisticated IoT devices. Using Silicon Labs' new Jade and Pearl Gecko MCUs, developers can easily add touch-control interfaces, powerful security capabilities and multiple low-power sensors to IoT devices. The new MCUs are optimized for high performance, low-energy applications and support over-the-air (OTA) updates to deployed end products.

Jade and Pearl Gecko MCUs offer best-in-class hardware cryptography technology featuring an energy-efficient security accelerator, a true random number generator (TRNG) and a security management unit (SMU), enabling secure connectivity for IoT devices without sacrificing battery life. The encryption/decryption accelerator runs the latest security algorithms with higher performance and lower power than conventional software implementations. An addition to the conventional memory protection unit, the SMU enables software to set up fine-grained security for peripheral access. Peripherals may be secured by hardware on an individual basis, allowing only privileged access to the peripheral's register interface.

The new MCUs offer more flash memory (up to 1024 kB with a dual-bank architecture) and RAM (up to 256 kB) than previous-generation Jade and Pearl Gecko products, making it easier to develop feature-rich embedded applications supporting real-time operating systems such as Micrium OS. The dual-bank memory architecture enables robust in-field update capabilities after product deployment.

Based respectively on ARM® Cortex®-M3 and M4 processors, the enhanced Jade and Pearl MCUs combine ultra-low active current consumption, a range of sleep mode capabilities and other architectural features to enable secure, battery-powered IoT products, as well as other embedded systems requiring high performance and low energy consumption. The new MCUs include an advanced capacitive sense controller that stays active when the device is in energy-saving deep-sleep mode and supports cap-touch interfaces without the cost and complexity of adding external controllers. The MCUs also feature Silicon Labs' LESENSE sensor interface, allowing autonomous access to sensor inputs while the MCU core remains in sleep mode.

"We continue to extend the Gecko MCU portfolio to meet the rapidly evolving needs of the IoT," said Daniel Cooley, Senior Vice President and General Manager of IoT products at Silicon Labs. "Our new Jade and Pearl MCUs offer an unmatched combination of security features, large memory options, peripheral integration, and ultra-low active and sleep mode currents."

The new Jade and Pearl MCUs are software compatible with the full range of EFM32 Gecko MCUs and Wireless Gecko SoCs, enabling broad software reuse and reduced development time and cost for developers. Silicon Labs plans to introduce new Gecko MCU products later this year with even higher performance, larger memory options, more low-energy peripherals and industrial communications capabilities.

Pricing and Availability
Samples and production quantities of EFM32JG12 Jade Gecko and EFM32PG12 Pearl Gecko MCUs are available now in 7 mm x 7 mm QFN48 and 7 mm x 7 mm BGA125 packages. Jade Gecko pricing begins at $3.01 (USD) in 10,000-unit quantities, and Pearl Gecko 10K pricing begins at $3.39 (USD). The SLSTK3402A EFM32PG Pearl Gecko Starter Kit, available now at an introductory price of $29.99 (USD MSRP), enables developers to jumpstart evaluation and development of Gecko-based applications. The Gecko MCU portfolio is supported by Silicon Labs' full suite of Simplicity Studio development tools, available to developers free of charge. To order Jade and Pearl Gecko product samples and development kits, visit www.silabs.com/gecko.

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