Silicon Labs Rolls out Next-Generation 8-Bit Microcontrollers for the IoT Age

New Energy-Friendly EFM8 MCU Family Delivers Unmatched Simplicity, Peripheral Integration and Performance for Cost- and Space-Sensitive Designs

“The EFM8 family embodies the future of Silicon Labs’ 8-bit MCU solutions for the IoT, delivering an unmatched combination of value, performance, energy efficiency, peripheral integration and flexibility”

NUREMBERG, Germany--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leading provider of energy-friendly microcontroller solutions for the Internet of Things (IoT), today introduced the company’s next-generation 8-bit MCU portfolio designed for today’s ultra-low-power, small-footprint IoT applications. Silicon Labs’ new EFM8 MCU family includes three lines of highly integrated, peripheral-rich MCUs optimized for exceptional price/performance value, ultra-low-power capacitive touch control and streamlined USB connectivity. The EFM8 MCUs bring industry-leading simplicity, power efficiency, performance and cost-saving integration to every 8-bit application that embedded developers can imagine including home and building automation, wearables, consumer electronics, toys, motor control and industrial IoT.

“Leading MCU vendors continue to advance the power efficiency and integration features of 8-bit solutions to keep this MCU market thriving for the foreseeable future,” said Tom Hackenberg, principal MCU analyst for IHS Technology. According to IHS, the 8-bit market will approach $7 billion (USD) in 2015 and grow to $7.8 billion in 2018 as it continues to sustain more than a third of the annual MCU market revenues. This steady growth is underpinned by market demand for sub-$0.50 MCU prices, tiny footprints, ultra-low power, low software overhead and design simplicity, all prerequisites for IoT devices. Silicon Labs designed the new EFM8 family to deliver best-in-class features and functionality in each of these application-critical areas.

The EFM8 MCU family meets IoT developer needs with an unparalleled combination of features and capabilities including a high-speed pipelined 8051 core, ultra-low power, precision analog and enhanced communication peripherals, integrated oscillators, small-footprint packages, and an advanced crossbar architecture that enables flexible digital and analog multiplexing to simplify printed circuit board (PCB) design and I/O pin routing.

The new EFM8 Bee family includes three MCU lines optimized for specific developer needs and applications. (The Bee family name underscores the scalable performance, energy efficiency and high productivity of the EFM8 platform.)

EFM8 Busy Bee: EFM8BB Busy Bee MCUs provide an optimal balance of no-compromise performance, power efficiency and value for cost-sensitive applications. With core speeds scaling up to 50 MHz and 2-16 kB flash sizes, the MCUs offer an array of high-performance peripherals including a 12-bit analog-to-digital converter (ADC). The MCUs are ideal for motor control applications (toys, fans and tools), power supplies, battery chargers, sensor controllers, consumer electronics and communication bridges.

EFM8 Sleepy Bee: EFM8SB Sleepy Bee MCUs are Silicon Labs’ most energy-friendly 8-bit devices offering industry-leading sleep mode power (50 nA with full memory retention and brown-out detection) and ultra-fast 2 µs wake-up time. Core speeds scale up to 25 MHz, and flash sizes range from 2-64 kB. The MCUs integrate a best-in-class capacitive sense controller offering an ultra-low-power < 1 µA wake-on-touch capability, eliminating the need for on/off switches in some products. These power-saving MCUs are ideal for touch-based, battery-powered IoT and industrial applications that require long battery lifetimes and energy-efficient human interfaces.

EFM8 Universal Bee: EFM8UB Universal Bee MCUs are the industry’s foremost 8-bit USB connectivity solution, with speeds of up to 48 MHz and 8-64 kB flash sizes. The MCUs combine a high-precision internal oscillator, clock recovery circuit and an integrated full-speed USB transceiver. Low-energy USB MCU versions can reduce USB power consumption by up to 90 percent. An on-chip battery charger detection module reduces bill-of-materials (BOM) count and system cost. The MCUs’ exceptional peripheral integration and small package sizes dramatically reduce the cost and complexity of adding USB connectivity to personal medical devices, wearables, communication bridges, toys, remote controls and thermostats.

“The EFM8 family embodies the future of Silicon Labs’ 8-bit MCU solutions for the IoT, delivering an unmatched combination of value, performance, energy efficiency, peripheral integration and flexibility,” said Daniel Cooley, vice president and general manager of Silicon Labs’ MCU and wireless products. “Our MCU customers embrace our proven, pipelined 8051 core, exceptional mixed-signal integration and superior peripheral mix, enabling them to work wonders in 8-bit applications with very tight power and cost budgets and ultra-small footprints. Developers also appreciate how quickly and easily they can get their 8-bit designs up and running with our Simplicity Studio development environment."

Simplifying 8-bit Design

Silicon Labs fully supports the EFM8 MCU family with comprehensive software and hardware toolkits offering an optimal, developer-friendly out-of-the-box experience. Silicon Lab’s enhanced Simplicity Studio development platform provides a unified 8/32-bit and wireless development environment that simplifies and accelerates 8-bit design with one-click access to Eclipse debuggers and plug-ins, Keil PK51 build tools, third-party tools support, a capacitive sense profiler, demos, software examples, data sheets, application notes, technical support and community forums. EFM8 customers can download Simplicity Studio at no charge at www.silabs.com/simplicity-studio.

Pricing and Availability

Samples and production quantities of Silicon Labs’ EFM8 MCUs are available now in a variety of small-footprint QFN, QSOP, SOIC and QFP packages. Starting prices for EFM8 MCUs in 10,000-unit quantities range from $0.21 for EFM8BB MCUs to $0.32 for EFM8SB MCUs to $0.43 for EFM8UB MCUs (all prices in USD). EFM8BB Busy Bee, EFM8SB Sleepy Bee and EFM8UB Universal Bee starter kits are priced at $29 each (USD MSRP). For more information about the new EFM8 family and to order MCU product samples and development kits, please visit www.silabs.com/EFM8.

Silicon Labs

Silicon Labs (NASDAQ: SLAB) is a leading provider of silicon, software and system solutions for the Internet of Things, Internet infrastructure, industrial automation, consumer and automotive markets. We solve the electronics industry’s toughest problems, providing customers with significant advantages in performance, energy savings, connectivity and design simplicity. Backed by our world-class engineering teams with unsurpassed software and mixed-signal design expertise, Silicon Labs empowers developers with the tools and technologies they need to advance quickly and easily from initial idea to final product. www.silabs.com

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Contact:

Silicon Labs
Dale Weisman, +1-512-532-5871

dale.weisman@silabs.com

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