Silicon Labs Launches AEC-Q100-Qualified EFM8 Microcontrollers for Automotive Market

-- New Automotive-Grade 8-Bit MCUs Target In-Cabin Touch Interface and Motor Control Applications --

AUSTIN, Texas – Nov. 17, 2016 – Silicon Labs has introduced two families of automotive-grade EFM8 microcontrollers (MCUs) designed to handle a wide range of in-cabin touch interface and body electronics motor control applications. The new AEC-Q100-qualified, ultra-low-power EFM8SB1 Sleepy Bee family provides advanced on-chip capacitive touch technology enabling easy replacement of physical buttons with touch control. The EFM8BB1/BB2 Busy Bee family features high-performance analog and digital peripherals, making these devices a versatile choice for controlling motorized rear view mirrors, headlights and seats.

All EFM8 MCUs deliver best-in-class 8-bit performance through a combination of advanced features and capabilities including a high-speed pipelined 8051 core, ultra-low power, precision analog and enhanced communication peripherals, on-chip oscillators, small-footprint packages, and a patented crossbar architecture that enables flexible digital and analog peripheral multiplexing to simplify PCB design and I/O pin routing.

EFM8SB Sleepy Bee MCUs are Silicon Labs' most energy-friendly 8-bit devices offering unrivaled touch performance, ultra-low sleep-mode power (50 nA with full memory retention and brown-out detection) and fast 2 µs wake-up time. The automotive-grade EFM8SB1devices support -40 to +85 oC ambient temperatures, core speeds up to 25 MHz and flash sizes up to 8 kB. The MCUs integrate a 12-bit analog-to-digital converter (ADC), high-performance timers, a temperature sensor, and enhanced SPI, I2C and UART serial ports. An on-chip high-resolution capacitive-to-digital converter (CDC) offers an ultra-low < 1 µA wake-on-touch capability and 12 robust capacitive touch channels, eliminating the need for on/off switches in many applications. The MCUs are ideal for touch-based controls such as dome lights and overhead buttons. Capacitive touch control provides a more durable, moisture-resistant user interface and a sleeker look and feel for today's electronics-laden vehicles.

Silicon Labs supports touch-sense interface design with its Capacitive Sense Library available within the Simplicity Studio™ development tool suite, offering all of the features and algorithms required to add capacitive sensing interfaces to automotive applications. Simplicity Studio provides designers with production-ready firmware, from scanning buttons to filtering noise. By using the Capacitive Sense Profiler to visualize real-time data and the noise levels of cap-sense buttons, developers can easily customize touch and no-touch thresholds and noise filtering settings, greatly simplifying the addition of capacitive touch to in-vehicle user interfaces.

EFM8BB1/BB2 Busy Bee MCUs provide the right balance of no-compromise performance, energy efficiency and value for cost-sensitive applications. With core speeds scaling up to 50 MHz and 2-64 kB flash sizes, the MCUs offer an array of high-performance peripherals including a high-resolution 12-bit ADC, high-speed 12-bit DACs, low-power comparators, voltage reference, enhanced-throughput communication peripherals and internal oscillators in packages as small as 3 mm x 3 mm. This exceptional single-chip integration eliminates the need for discrete analog components, reducing system cost and board space.

Supporting an extended temperature range of -40 to +125 oC, the EFM8BB1/BB2 devices are suitable for applications that must meet tough automotive qualifications and operate over a wide temperature range while delivering high performance at all temperatures. The EFM8BB1 devices offer optimal price/performance for cost-sensitive designs, while the BB2 products deliver enhanced analog and digital peripheral performance. The EFM8BB1/BB2 MCUs are a good choice for analog-intensive automotive body control applications such as seat adjustment, fan control, window lifters and fuel tank sensors.

Simplicity Studio tools such as a configurator and energy profiler help developers accelerate the design process and optimize for energy efficiency. EFM8 customers can download Simplicity Studio at no charge at www.silabs.com/simplicity-studio.

Pricing and Availability

Samples and production quantities of the automotive-grade EFM8SB1 and EFM8BB1/BB2 MCUs are available in a wide range of space-saving QFN packages. Starting prices in 10,000-unit quantities include $0.59 for EFM8SB1 MCUs, $0.47 for EFM8BB1 MCUs and $0.71 for EFM8BB2 MCUs (all prices USD). Starter development kits for these automotive-grade MCUs are priced at $29 each (USD MSRP). For more information about the new AEC-Q100-qualified EFM8 MCUs and to order product samples and starter kits, please visit www.silabs.com/efm8.

Connect with Silicon Labs

Silicon Labs PR Contact: Dale Weisman +1-512-532-5871, dale.weisman@silabs.com

Follow Silicon Labs at http://news.silabs.com/, at http://blog.silabs.com/, on Twitter at http://twitter.com/siliconlabs, on LinkedIn at http://www.linkedin.com/company/silicon-labs and on Facebook at http://www.facebook.com/siliconlabs.

Silicon Labs

Silicon Labs (NASDAQ: SLAB) is a leading provider of silicon, software and 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

Cautionary Language

This press release may contain forward-looking statements based on Silicon Labs' current expectations. These forward-looking statements involve risks and uncertainties. A number of important factors could cause actual results to differ materially from those in the forward-looking statements. For a discussion of factors that could impact Silicon Labs' financial results and cause actual results to differ materially from those in the forward-looking statements, please refer to Silicon Labs' filings with the SEC. Silicon Labs disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Note to editors: Silicon Labs, Silicon Laboratories, the "S" symbol, the Silicon Laboratories logo and the Silicon Labs logo are trademarks of Silicon Laboratories Inc. All other product names noted herein may be trademarks of their respective holders.