Silicon Labs Unveils Latest Low-Power Development Tools at Embedded World 2013

Power-Aware Software, Energy-Efficient Humidity Sensing and Ultra-Low-Power Supercapacitor-Charged Development Board on Display

“To help make the embedded design process faster and easier, we have invested in developing a rich set of free software and cost-effective hardware tools specifically designed to ease development, simplify low-power optimization and enable rapid prototyping.”

NUREMBERG, Germany--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today unveiled Precision32™ software and hardware development tools that enable engineers to maximize the power efficiency of their 32-bit embedded designs. Hands-on demonstrations of the latest low-power tools are highlighted this week at Silicon Labs’ Booth 4A-211 at Embedded World.

A leading supplier of mixed-signal microcontrollers (MCUs), Silicon Labs offers a diverse portfolio of Precision32 MCUs based on the ARM® Cortex™-M3 processor. This portfolio is supported by a rich set of development tools that enables designers to optimize their designs for the lowest power consumption without compromising performance. Silicon Labs’ new low-power tools on display at Embedded World include the following:

Power-aware software tools: Silicon Labs’ complimentary Eclipse-based IDE and AppBuilder software for Precision32 MCUs include first-of-a-kind tools that enable developers to estimate power consumption and receive configuration guidance to minimize system power. The *Power Estimator* tool gives developers a top-level graphical view of how a Precision32 MCU uses power in active and sleep mode. The tool enables developers to adjust power usage at the onset of a project even without having development hardware. *Power Estimator* automatically updates the system design with configuration changes, allowing developers to optimize each mode for the lowest power. A companion tool, *Power Tips*, provides software configuration guidance that helps developers minimize current consumption. *Power Tips* automatically appears within AppBuilder when the cursor hovers over a configurable setting. This simple ability to see power optimization tips while configuring the MCU saves considerable development time.

Low-power 32-bit humidity sensing demonstration: This demonstration highlights the functionality of Silicon Labs’ new Si7005 relative humidity (RH) and temperature sensor in a SiM3L1xx MCU evaluation board environment. The standalone, battery-powered demonstration board includes an LCD panel that shows changes in temperature and humidity readings from the Si7005 sensor. The demo includes example code that can be used to speed development of applications requiring both an ultra-low-power 32-bit MCU and humidity and temperature sensors such as smart thermostats and in-home energy monitoring systems. The Si7005 sensor provides an accurate, low-power digital solution for measuring temperature, humidity and dew point in applications ranging from HVAC and refrigeration to asset tracking to industrial control.

Low-Power SiM3L1xx development board: Roughly the same size as an ID badge, this compact development board showcases the power efficiency of SiM3L1xx MCUs. The board contains an ultra-low-power SiM3L1xx MCU, segmented LCD, supercapacitor, LED and photodiode sensor, debug interface and USB port. The board can display information continuously on the LCD for up to three days after a quick 90-second charge of the supercapacitor through a USB cable. Using the USB connector and debug interface, developers can connect the board to a PC and use the Precision32 IDE for software development. The board offers a “demo mode” that shows typical power consumption for various MCU operating modes on the segmented LCD. Developers can also download an iPhone app that lets them enter text such as names and phone numbers and then send the information to the board using specialized image patterns on the iPhone’s LCD that are received by the board’s photodiode sensor.

“Providing embedded developers with a comprehensive suite of tools is just as important as the MCU itself,” said Diwakar Vishakhadatta, vice president and general manager of Silicon Labs’ Embedded Systems business. “To help make the embedded design process faster and easier, we have invested in developing a rich set of free software and cost-effective hardware tools specifically designed to ease development, simplify low-power optimization and enable rapid prototyping.”

For additional Precision32 MCU information and product samples and to download complimentary software development tools, please visit www.silabs.com/pr/32bit-mcu.

Silicon Labs

Silicon Labs is an industry leader in the innovation of high-performance, analog-intensive, mixed-signal ICs. Developed by a world-class engineering team with unsurpassed expertise in mixed-signal design, Silicon Labs' diverse portfolio of patented semiconductor solutions offers customers significant advantages in performance, size and power consumption. For more information about Silicon Labs, please visit www.silabs.com.

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