Silicon Labs Launches Blue Gecko Bluetooth Smart Solutions

Blue Gecko Modules, SoCs, Development Kit and Software Stack Provide Easy On-Ramp to Ultra-Low-Power Wireless Connectivity

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NUREMBERG, Germany--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leading provider of wireless connectivity solutions for the Internet of Things (IoT), today unveiled a complete Bluetooth® Smart solutions portfolio designed to help developers minimize the energy consumption, cost and complexity of wireless IoT designs. Silicon Labs’ recent acquisition of Bluegiga, a leading supplier of wireless modules and software, accelerates the company’s ability to deliver comprehensive Bluetooth Smart solutions. Silicon Labs’ new Blue Gecko solutions include ultra-low-power wireless system-on-chip (SoC) devices, embedded modules, and Bluegiga’s software development kit (SDK) and Bluetooth Smart software stack. Blue Gecko wireless SoCs and modules help developers simplify design and speed time to market for a wide range of applications for the connected home, health and fitness, wearables, automotive, consumer electronics, audio and industrial automation markets.

The Blue Gecko portfolio addresses the largest, fastest-growing low-power wireless connectivity opportunity in the IoT market. According to IHS Technology, Bluetooth Smart will represent 42 percent of the total low-power wireless module and chipset market by unit volume in 2018. A significant number of Bluetooth Smart chipsets are currently used in wireless modules to meet the needs of low-volume IoT applications, greatly simplifying RF design. By the end of the decade, the use of cost-effective Bluetooth Smart chipsets and wireless SoCs is expected to outpace modules as many IoT applications reach higher volumes. Silicon Labs’ Blue Gecko portfolio provides developers with the flexibility to begin development with modules and transition to SoCs when needed with little to no system redesign.

“Our new Blue Gecko portfolio gives developers a rapid on-ramp to the IoT, enabling them to bring Bluetooth Smart-enabled products to market quickly while maintaining their investments in tools and software as they migrate from modules to chips for later production,” said James Stansberry, senior vice president and general manager of IoT products at Silicon Labs. “Our Bluegiga acquisition provided a best-of-breed scripting language and protocol stack that we’re leveraging in our Blue Gecko portfolio, making it easy to add Bluetooth Smart connectivity to countless IoT applications.”

Blue Gecko Wireless SoCs

The first in a family of wireless SoCs optimized for IoT applications, Blue Gecko SoCs combine Silicon Labs’ energy-friendly EFM32® Gecko MCU technology with an ultra-low-power Bluetooth Smart transceiver. This innovative, single-die solution provides industry-leading energy efficiency, the fastest wake-up times, superior RF sensitivity and no-compromise MCU features combined with the Bluegiga Bluetooth Smart software stack to help developers reduce system power, cost and time to market. Unlike other Bluetooth Smart IC alternatives, a Blue Gecko SoC can transmit +10 dBm or higher output power with its fully integrated power amplifier and balun, further reducing design complexity.

Blue Gecko SoCs are based on the ARM® Cortex®-M3 and M4 cores and offer 128 to 256 kB flash sizes and 16 to 32 kB RAM sizes. The SoCs integrate an array of low-energy peripherals as well as Silicon Labs’ Peripheral Reflex System(PRS) for autonomous peripheral operation. The Blue Gecko SoC family also offers a roadmap of enhanced flash and RAM memory sizes and additional package options to meet future application needs.

Blue Gecko Wireless Modules

Bluegiga modules based on Blue Gecko SoCs are designed to help developers accelerate time to market and reduce development costs and compliance risks by providing a pre-certified, plug-and-play RF design. Bluegiga Bluetooth Smart modules incorporate all features of Blue Gecko SoCs and are certified for use in all key markets including North America, Europe, Japan and South Korea. Bluegiga modules include the Bluegiga Bluetooth Smart software stack and profile toolkit and come with 256 kB flash and 32 kB RAM, providing ample available memory for onboard applications. Flexible hardware interfaces enable easy connection to a variety of peripherals and sensors, and an integrated antenna makes RF operation consistent and straightforward for the design engineer. Bluegiga Bluetooth Smart modules provide very low power operation, enabling wireless system designs to be powered from a standard 3 V coin cell battery or two AAA batteries.

Simplifying Bluetooth Smart Development

To simplify wireless development, Silicon Labs offers the complete Bluegiga Bluetooth Smart software stack for Blue Gecko modules and wireless SoCs. The stack implements the Bluetooth Smart protocol layers including the Attribute Protocol (ATT), the Generic Attribute Profile (GATT), the Generic Access Protocol (GAP), a security manager and connection management.

The Blue Gecko portfolio includes a comprehensive wireless SDK for developing Bluetooth Smart applications using either a host or fully standalone applications through the easy-to-use Bluegiga BGScript™ scripting language. BGScript enables developers to create applications quickly without using external MCUs to run the application logic, enabling them to reduce cost, simplify their designs and get to market faster. Bluetooth Smart application profiles and examples are also available to help streamline development.

Pricing and Availability

Samples of Bluegiga modules based on Blue Gecko SoCs are planned to be available in late Q2 2015. Samples of Blue Gecko wireless SoCs are planned to be available in early Q3 in a choice of 5 mm x 5 mm QFN32 and 7 mm x 7 mm QFN48 packages. Pricing for Blue Gecko-based Bluegiga modules begins at $4.99 in 10,000-unit quantities. Blue Gecko SoC pricing begins at $0.99 in 100,000-unit quantities. The Bluegiga SDK and Bluetooth Smart software stack will be available to Silicon Labs' customers at no charge. For more information about Silicon Labs' Blue Gecko Bluetooth Smart solutions and to pre-order modules and SoC samples, please visit www.silabs.com/BlueGecko.

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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