Silicon Labs Advances Bluetooth Smart Connectivity with Energy-Friendly SoC and Software Solution

Scalable Blue Gecko SoC Family Delivers Industry-Leading Transmit Power for Bluetooth®-Certified End Products

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NUREMBERG, Germany--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB) has introduced its Blue Gecko wireless SoC family offering flexible price/performance options and output power scaling up to +19.5 dBm – the highest available for the Bluetooth® Smart market. A part of Silicon Labs' multiprotocol Wireless Gecko portfolio announced today, the new EFR32BG Blue Gecko SoC family sets a new standard for scalability, energy efficiency, security and design simplicity for Bluetooth Smart applications. Supported by best-in-class development tools and software, Blue Gecko SoCs reduce the cost and complexity of adding Bluetooth Smart to an array of applications including the connected home, wearables, remote controls, baby monitors, beacons, electronic shelf labels, health and fitness devices, and point of sale equipment.

Get all the details about Silicon Labs' Blue Gecko SoC family including pricing and availability, Bluetooth Smart stack, development tools and data sheets at www.silabs.com/BlueGecko.

The new Blue Gecko SoCs round out Silicon Labs' Blue Gecko portfolio, the most comprehensive, flexible set of hardware/software solutions available for Bluetooth Smart 4.2-ready development. In addition to the wireless SoCs, the Blue Gecko portfolio includes pre-certified wireless modules, Silicon Labs' Bluetooth Smart software stack and an easy-to-use software development kit (SDK). Customers who want to optimize their bill of materials (BOM) and R&D costs can begin designing with a Blue Gecko module for faster time to market, design simplicity, and minimal certification-related cost and effort, and then migrate to a cost-efficient Blue Gecko SoC-based design with minimal system redesign and complete software reuse.

Blue Gecko SoCs offer outstanding -94 dBm sensitivity and the highest output power available in the Bluetooth Smart market, scaling from -30 dBm up to +19.5 dBm – the maximum transmit power allowed for Bluetooth-certified end products. The SoCs achieve this market-leading wireless performance while reducing design complexity, BOM cost and board space with an integrated balun and a software-programmable power amplifier (PA) that enables Bluetooth Smart products to deliver optimal battery life regardless of the chosen output power.

"Blue Gecko SoCs provide a smarter choice for the Bluetooth Smart market by offering an unmatched combination of RF performance, energy efficiency, security and design simplicity enabled by our best-in-class wireless SDK, software stack and global customer support," said Daniel Cooley, vice president of marketing for IoT products at Silicon Labs. "The Blue Gecko portfolio leverages a common software architecture making it easy for customers to migrate from modules to SoCs as their volumes and product requirements change, while also providing code portability and usability across different Wireless Gecko SoC products."

Blue Gecko SoC Product Highlights

- Single-die SoC combining Gecko MCU technology with a 2.4 GHz RF transceiver
- Multiprotocol support for Bluetooth Smart and proprietary 2.4 GHz protocols
- Among the most energy-efficient Bluetooth Smart SoCs available, consuming 8.7 mA in peak receive mode and 8.8 mA @ 0 dBm in peak transmit mode
- 40 MHz ARM Cortex-M4 processor with powerful floating point and DSP capabilities
- Energy-friendly Gecko MCU consumes only 63 µA/MHz in active mode
- Integrated hardware cryptographic accelerator enabling fast, energy-efficient autonomous encryption and decryption of Internet security protocols with minimal CPU intervention
- Support for advanced algorithms such as AES with 128- or 256-bit keys, elliptical curve cryptography (ECC), SHA-1 and SHA-224/256
- Flexible price/performance options with choice of output power, package configurations (QFN32, QFN48) and memory sizes (128-256 kB flash, 16-32 kB RAM)

"Silicon Labs' Blue Gecko SoCs provide Mobilogix with an ideal Bluetooth platform to build very high-performance, feature-rich devices exceeding design specs while meeting BOM cost targets and other requirements. Our beacon products based on Blue Gecko SoCs will deliver an experience that our global customers demand and expect in wireless performance, sensitivity and

range," said James Jefferies, president and CEO of Mobilogix, a leading Internet of Things (IoT) systems integrator. "A deciding factor in our choice of Blue Gecko is Silicon Labs' comprehensive Bluetooth Smart ecosystem, which includes pre-certified module options and easy-to-use development tools that make wireless design incredibly fast and productive."

The Blue Gecko SoC family is supported by Silicon Labs' Simplicity Studio™ development platform, a unified environment for concurrent MCU and RF design. Simplicity Studio tools include AppBuilder enabling developers to simplify wireless configuration; Desktop Network Analyzer providing full visibility of all wireless networking activity; and Energy Profiler allowing developers to optimize energy consumption and extend battery life. Silicon Labs' easy-to-use BGScript™ scripting language further simplifies Bluetooth Smart development. Using the familiar, BASIC-like BGScript syntax, developers can create Bluetooth applications quickly without requiring external MCUs to run the application logic.

Pricing and Availability

Engineering samples of EFR32BG Blue Gecko SoCs are available now in a choice of 5 mm x 5 mm QFN32 and 7 mm x 7 mm QFN48 packages. Production parts are planned for Q2 2016. Blue Gecko SoC pricing begins at $0.99 (USD) in 100,000-unit quantities. The SLWSTK6020A Blue Gecko Starter Kit is available now and priced at $99 (USD MSRP). To order Blue Gecko SoC samples and development kits, visit www.silabs.com/BlueGecko.

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Silicon Labs

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