Silicon Labs Simplifies Bluetooth Smart Design with Fully Integrated Blue Gecko Module

BGM111 Module with Pre-Installed BLE Stack and Easy-to-Use Scripting Language Provides Plug-and-Play Solution with Seamless SoC Migration Path

“Our fully integrated module design, best-in-class scripting language and software stack, and knowledgeable support team enable our customers to develop their Bluetooth Smart applications with the lowest R&D investment, saving months of engineering effort and testing.”

SHANGHAI--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leading provider of wireless connectivity solutions for the Internet of Things (IoT), today introduced a fully integrated, pre-certified Bluetooth® Smart module solution that gives developers the fastest path to low-power wireless connectivity for the IoT. The new BGM111 module is the first in a family of advanced Blue Gecko modules from Silicon Labs delivering best-in-class integration, flexibility, energy efficiency and toolchain support with an easy migration path to Blue Gecko system-on-chip (SoC) solutions. The BGM111 Blue Gecko module simplifies Bluetooth Smart design and accelerates time to market for a wide array of applications including smart phone accessories, beacons, connected home devices, health and fitness trackers, personal medical devices, automotive diagnostics, industrial sensors and point of sale terminals.

Based on Silicon Labs’ Blue Gecko wireless SoCs, the BGM111 modules help developers reduce development costs and regulatory compliance effort by providing a plug-and-play Bluetooth Smart design pre-certified for use in key markets including North America, Europe and Asia-Pacific. The BGM111 modules are pre-loaded with the Bluegiga Bluetooth 4.1-compliant software stack and profiles and are field-upgradable using device firmware upgrades to Bluetooth 4.2 and beyond.

The BGM111 module abstracts the complexity out of RF design, the Bluetooth Smart protocol and embedded programming. Silicon Labs’ Blue Gecko portfolio provides developers with the flexibility to begin Bluetooth development with BGM111 modules and then transition to Blue Gecko SoCs when needed with minimal system redesign and full software reuse. Customers who need the opportunity to optimize the bill of materials (BOM) and reduce R&D cost can begin designing with the module for faster time to market and minimal design effort, and then later migrate to a Silicon Labs Blue Gecko SoC-based design with a seamless software experience.

The BGM111 module is supported by the most efficient development environment in the Bluetooth market. Silicon Labs’ wireless SDK gives developers the flexibility to use either a host or fully standalone operation through the easy-to-use Bluegiga BGScript™ scripting language. Using a familiar BASIC-like syntax, BGScript enables developers to create Bluetooth applications quickly without using external MCUs to run the application logic. All application code can be executed on the BGM111 module, eliminating the need for an external MCU, which helps reduce cost and board space and speeds time to market. Bluetooth Smart application profiles and examples are also available to streamline development.

The BGM111 modules incorporate all features of Blue Gecko SoCs and come with 256 kB flash and 32 kB RAM, providing ample memory for onboard applications. The SoC’s built-in hardware cryptographic accelerator offers the assurance of a future-proof roadmap for evolving security requirements. Flexible hardware interfaces enable easy connection to a variety of peripherals and sensors. An integrated, high-efficiency antenna makes RF design and operation consistent and straightforward for developers of all skill levels.

The BGM111 module’s ultra-low power operation enables Bluetooth Smart systems to be powered from a standard 3 V coin cell battery or two AAA batteries. The SoC’s integrated ARM® Cortex®-M4 processor-based MCU consumes 59 µA/MHz in run mode and only 1.7 µA down to 200 nA in sleep mode. The SoC’s on-chip Bluetooth Smart transceiver consumes only 7.5 mA in peak receive mode and 8.2 mA @ 0 dBm in peak transmit mode. The transceiver also provides the industry’s most flexible transmit power, configurable up to +8 dBm and supporting exceptional line-of-sight RF range of up to 200 meters.

“Our pre-certified BGM111 module provides the fastest wireless on-ramp to the IoT, enabling developers to get their Bluetooth Smart products to market quickly while preserving their investments in tools and software when they migrate from modules to SoCs for volume production,” said Riku Mettälä, general manager of wireless module products at Silicon Labs. “Our fully integrated module design, best-in-class scripting language and

software stack, and knowledgeable support team enable our customers to develop their Bluetooth Smart applications with the lowest R&D investment, saving months of engineering effort and testing."

Pricing and Availability

Pre-production samples of the BGM111 Blue Gecko module, supported by the SLWSTK6101A Blue Gecko wireless starter kit, are available now for engineering evaluation and prototyping. Volume quantities of the module are planned for Q4. The module's 12.9 mm x 15 mm x 2.2 mm form factor is ideal for a wide range of space-constrained applications. BGM111 module pricing begins at $4.97 (USD) in 10,000-unit quantities, and the SLWSTK6101A starter kit is priced at $150 (USD MSRP). For additional BGM111 Blue Gecko module information and to order samples and starter kits, please visit www.silabs.com/BlueGecko.

Silicon Labs

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