Mesh Networking Module from Silicon Labs Simplifies Thread and ZigBee Connectivity

MGM111 Mighty Gecko Module with Best-in-Class Wireless Stacks and Software Tools Helps Developers Get to Market Quickly

“As the market leader in mesh networking silicon and software, Silicon Labs offers more than a decade of leadership in developing and certifying standards-based mesh networking solutions”

AUSTIN, Texas--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB) has introduced a new family of Wireless Gecko modules focused on mesh networking applications with support for best-in-class ZigBee® and Thread software. Silicon Labs’ new MGM111 module is the first in this comprehensive family of multiprotocol modules based on the Mighty Gecko system-on-chip (SoC) device. The MGM111 module is supported by Silicon Labs’ reliable, secure and flexible mesh protocol stacks and the industry’s most advanced wireless software development tools. The module’s combination of onboard stacks, antenna options and RF regulatory certifications helps developers reduce cost, complexity and time to market for an array of mesh networking applications including home and building automation, connected lighting, smart metering, security systems and other IoT platforms.

Get all the details about Silicon Labs’ MGM111 Mighty Gecko module including pricing and availability, protocol stacks, development tools, technical specifications and worldwide certifications at www.silabs.com/mightygeckomodule .

The MGM111 module gives developers a rapid on-ramp to the IoT, enabling them to bring mesh networking products to market quickly and easily with minimal engineering and certification costs. Mighty Gecko modules and wireless SoCs have similar technical features and application programming interfaces (APIs). This hardware and software compatibility makes it easy to migrate from modules to SoCs while enabling developers to preserve their investments in tools and software with little to no system redesign.

The MGM111 module combines a 2.4 GHz Mighty Gecko SoC, high-efficiency chip antenna, crystals, and RF matching and shielding into a complete, ready-to-use mesh networking module supporting ZigBee and Thread protocol stacks. This high level of integration frees developers from complex RF/antenna design and testing and allows them to focus on their end applications. The MGM111 module complies with the IEEE 802.15.4 standard used in ZigBee and Thread stacks and will be pre-certified for compliance with the following regulatory requirements: FCC (North America), IC (Canada), CE (Europe), RCM (AU/NZ) and KC (Korea).

“As the market leader in mesh networking silicon and software, Silicon Labs offers more than a decade of leadership in developing and certifying standards-based mesh networking solutions,” said Skip Ashton, VP of IoT software at Silicon Labs and a member of the board of directors for the ZigBee Alliance and the Thread Group. “Our customers rely on our deep understanding of mesh technology and RF certification. They also appreciate that we offer the tools and stacks they need to simplify the development process, as well as an upgrade path that safeguards their IoT products from being stranded on older technologies and standards.”

Silicon Labs has shipped more than 100 million mesh networking SoCs and modules to customers worldwide. A long-time member of the ZigBee Alliance, Silicon Labs is the leading provider of silicon solutions running ZigBee PRO mesh networking software. In addition, Silicon Labs is a founding member of the Thread Group and has been instrumental in defining and developing the Thread software specification.

The MGM111 module comes in a compact 12.9 mm x 15 mm package that is footprint- and pin-compatible with Silicon Labs’ BGM111 Blue Gecko module supporting Bluetooth low energy technology. This compatibility eases migration and enables developers to support multiple wireless protocols with a common, future-proven system design.

The MGM111 module is supported by Silicon Labs’ Simplicity Studio™ development platform, a comprehensive suite of development and debugging tools that accelerates IoT product design. Key Simplicity Studio tools include AppBuilder, allowing developers to easily configure wireless applications while ensuring software reuse across designs based on Wireless Gecko technology; Network Analyzer, providing full visibility and debugging of wireless networking activity by using the module’s packet trace port; and Energy Profiler, enabling developers to minimize the energy consumption of their code and extend battery life.

MGM111 Mighty Gecko Module Key Features

- Features the Mighty Gecko SoC combining a 2.4 GHz transceiver with a 40 MHz ARM® Cortex®-M4 core and 256 kB flash and 32 kB RAM
- Enables rapid time-to-market with onboard stack, antenna and regulatory certifications
- Supports Silicon Labs' reliable, secure and flexible ZigBee and Thread stacks
- Supports AES, ECC and SHA algorithms with a hardware cryptography accelerator
- Supports standalone or network co-processor (NCP) architectures
- Offers up to +10 dBm transmit power
- Energy-efficient radio consumes only 9.8 mA (receive mode) and 8.2 mA @ 0 dBm (transmit mode)
- Leverages the same powerful, easy-to-use Simplicity Studio development tools as Mighty Gecko SoCs and Blue Gecko SoCs and modules
- Provides customers with an easy migration path to discrete SoC designs
- Supported by Silicon Labs' worldwide applications engineering team

Pricing and Availability

Pre-production samples of the MGM111 Mighty Gecko module are available now for engineering evaluation and prototyping, and volume quantities are planned for Q4 when certifications are expected to be complete. For MGM111 module pricing, please contact your local Silicon Labs sales representative or an authorized distributor. The Mighty Gecko Starter Kit (SLWSTK6000A, priced at $499 USD MSRP) combined with an add-on MGM111 Radio Board (SLWRB4300B, each priced at $49 USD MSRP) enables easy evaluation of the MGM111 module. To order MGM111 Mighty Gecko module samples, development kits and radio boards, please visit www.silabs.com/mightygeckomodule.

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Silicon Labs

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