

New Silicon Labs Mesh Networking Modules Streamline Secure IoT Product Design

-- Pre-Certified Zigbee®, Thread and Bluetooth® Mesh Modules Simplify Development of Smart LED, Home Automation and Industrial IoT Solutions --

AUSTIN, Texas, Sept. 25, 2019 /PRNewswire/ -- [Silicon Labs](#) (NASDAQ: SLAB) has launched a new portfolio of highly integrated, secure Wireless Gecko modules that reduce development cost and complexity, making it easier to add robust mesh networking connectivity to a wide range of Internet of Things (IoT) products. The new [MGM210x and BGM210x Series 2 modules](#) support leading mesh protocols (Zigbee®, Thread and Bluetooth® mesh), Bluetooth Low Energy and multiprotocol connectivity. They offer a one-stop wireless solution to improve mesh network performance for line-powered IoT systems ranging from smart LED lighting to home and industrial automation.

Time to market is a key challenge and a potential competitive advantage for IoT product developers. Silicon Labs' pre-certified xGM210x modules help reduce R&D cycles related to RF design and protocol optimization, allowing developers to focus on their end applications. Pre-certified for North America, Europe, Korea and Japan, the modules minimize the time, cost and risk factors related to global wireless certifications. xGM210x modules make it possible to accelerate time to market by several months.

The new modules are based on Silicon Labs' [Wireless Gecko Series 2 platform](#) featuring industry-leading RF performance, a powerful Arm® Cortex®-M33 processor, best-in-class software stacks, a dedicated security core and a +125 °C temperature rating suited for harsh environmental conditions. xGM210x modules are engineered to optimize the performance of resource-constrained IoT products without requiring functionality tradeoffs impacting communication reliability, product security or field upgradability. An integrated RF power amplifier also makes the modules ideal for long-range Bluetooth Low Energy applications requiring hundreds of meters of line-of-sight connectivity.

"This new portfolio of application-optimized modules provides a fast and easy wireless on-ramp to mesh networking, helping IoT developers get their connected products to market ahead of the competition while preserving their investments in tools and software," said Matt Saunders, Vice President of Marketing and Applications, IoT Products, Silicon Labs. "Our fully integrated module design, comprehensive wireless stacks, state-of-the-art security and powerful development tools help our customers add wireless connectivity and mesh capabilities to IoT applications with the lowest R&D investment, saving months of engineering effort and testing."

The Series 2 module portfolio's initial families include the industry's first pre-certified wireless modules optimized for LED light bulbs and a versatile printed-circuit board (PCB) form-factor module designed to meet the needs of a broad range of ultra-small IoT product designs.

xGM210L modules are designed to meet the unique performance, environmental, reliability and cost needs of smart LED lighting. The modules combine a custom form factor to ease mounting inside LED bulb housings, PCB trace antenna to maximize wireless range, high temperature ratings, extensive global regulatory certifications and low active power consumption, delivering the perfect wireless solution for cost-sensitive, high-volume smart LED lightbulbs.

xGM210P modules feature a PCB form factor, integrated chip antenna and minimal clearance areas for mechanics, simplifying space-constrained IoT designs including smart lighting, HVAC, building and factory automation systems.

Securing the IoT

xGM210x modules provide best-in-class features that enable developers to implement robust security in IoT products. Secure boot with root of trust and secure loader (RTSL) technology helps prevent malware injection and rollback to ensure authentic firmware execution and over-the-air (OTA) updates. A dedicated security core isolates the application processor and delivers fast, energy-efficient cryptographic operations with differential power analysis (DPA) countermeasures. A true random number generator (TRNG) compliant with NIST SP800-90 and AIS-31 strengthens device cryptography. A secure debug interface with lock/unlock allows authenticated access for enhanced failure analysis. The module's Arm Cortex-M33 core integrates TrustZone technology, enabling system-wide hardware isolation for trusted software architectures.

Simplifying IoT Development

Developers can further accelerate time-to-market by taking advantage of Silicon Labs' [Simplicity Studio](#) integrated development environment featuring comprehensive software stacks, application demos and mobile apps. Advanced software tools including a patented network analyzer and energy profiler help developers optimize the wireless performance and energy consumption of IoT applications.

Pricing and Availability

Samples and production quantities of the xGM210P modules are available now. Samples and production quantities of the xGM210L modules are planned to be available in Q4 2019. The Wireless Gecko starter kit mainboard and Series 2 radio boards are also available now. Contact your local Silicon Labs sales representative or authorized distributor for Series 2 module and development kit pricing. For additional information, visit silabs.com/series-2-modules.

Silicon Labs

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Connect with Silicon Labs

Silicon Labs PR Contact: Dale Weisman +1-512-532-5871, dale.weisman@silabs.com

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