New Wireless Gecko SoCs Help Developers Tackle Multiprotocol IoT Design Challenges

-- Silicon Labs' EFR32xG12 Supports Complex IoT Applications with a Rich Set of Connectivity, Memory and Peripheral Features --

NUREMBERG, Germany, March 14, 2017 /PRNewswire/ -- (Embedded World) -- Silicon Labs (NASDAQ: SLAB) announces a major expansion of its Wireless Gecko system-on-chip (SoC) portfolio, making it easier for developers of all skill levels to add versatile multiprotocol switching capabilities to increasingly complex IoT applications. The new EFR32xG12 SoCs support a broader range of multiprotocol, multiband use cases for home automation, connected lighting, wearables and industrial IoT. These SoCs deliver superior RF performance, enhanced cryptography acceleration, larger memory options, on-chip capacitive touch control, and additional low-power peripherals and sensor interfaces.

"Multiprotocol connectivity provides advanced capabilities to help simplify our networked lighting control designs while also satisfying customer needs for easy installation and over-the-air upgrades that extend product life," said Bruce Bharat, Director of Product Marketing – Networked Controls, Acuity Brands Lighting, a market leader in providing indoor and outdoor lighting, controls and energy management solutions. "Silicon Labs' Wireless Gecko platform gives us the multiprotocol SoCs, modules, robust software stacks and powerful development tools we need to get our network-enabled LED fixtures and controls to market quickly."

Wireless Gecko SoCs support zigbee® and Thread mesh networking, Bluetooth® 5 and proprietary wireless protocols. Silicon Labs has optimized its wireless protocol stack architecture to enable efficient switching between different network protocols. For example, device makers can now use a single chip to commission and configure devices over Bluetooth with a smartphone, and then join a zigbee or Thread mesh network to connect to dozens or even hundreds of end nodes.

"The EFR32 Wireless Gecko portfolio is the most versatile, feature-rich multiprotocol platform available today," said Daniel Cooley, Senior Vice President and General Manager of Silicon Labs' IoT products. "We continue to enhance the Wireless Gecko platform with new hardware and software capabilities that advance multiprotocol connectivity and address the real-world requirements of IoT products."

Superior RF Performance and Security
The Wireless Gecko portfolio offers the highest output power (up to +19 dBm) in the multiprotocol SoC market, reducing system size, cost and complexity by eliminating the need for an external power amplifier. EFR32xG12 SoCs also offer exceptional sensitivity in the 2.4 GHz band (-102.7 dBm for zigbee and Thread and -95 dBm for Bluetooth low energy) as well as improved sub-GHz performance for applications using proprietary protocols. The combination of highest RF output power and best sensitivity enables excellent wireless range, greater reliability and improved battery life for IoT applications such as smart meters.

EFR32BG12 Blue Gecko SoCs feature a 2 Mbps Bluetooth PHY, providing ample throughput for applications running a Bluetooth 5-compliant stack. The Bluetooth 5 standard enables four times the range, twice the speed, 800 percent greater broadcasting capacity and improved co-existence with other wireless IoT protocols.

To help secure the IoT, the EFR32xG12 SoCs include a second on-chip security accelerator dedicated to the multiprotocol radio and a NIST-certified true random number generator (TRNG). This additional hardware cryptography block runs the latest security algorithms with higher performance and lower power than conventional software implementations.

More Memory and Peripherals
EFR32xG12 SoCs offer four times more flash memory (up to 1024 kB with a dual-bank architecture) and eight times more RAM (up to 256 kB) than previous-generation Wireless Gecko devices. This significant memory expansion makes it easier to develop complex, feature-rich IoT applications supporting multiple protocol stacks, real-time operating systems such as Micrium OS, backup images for devices and over-the-air (OTA) updates for field upgrades to extend the life of IoT products.

The SoCs' expanded set of digital and analog peripherals gives developers greater design flexibility and the ability to connect additional components, such as sensors. An autonomous capacitive sensing controller provides direct support for cap-touch interfaces in IoT products, without the cost and complexity of adding external controllers.

Pricing and Availability
EFR32xG12 Wireless Gecko SoC samples and production quantities are available now in 7 mm x 7 mm QFN48 packages, as well as 65-GPIO 7 mm x 7 mm BGA options for feature-rich applications requiring a large number of I/Os. Pricing for EFR32xG12 SoCs in volume quantities begins below $3.00 USD. For Mighty Gecko, Blue Gecko and Flex Gecko SoC pricing information, contact your local Silicon Labs sales representative or authorized distributor. The full-featured SLWSTK6000A Mighty Gecko Mesh Development Kit, supporting all protocols, is priced at $499. Additional radio boards for Mighty Gecko, Blue Gecko and Flex Gecko are available priced at $49. (All kits USD MSRP.) The Wireless Gecko portfolio is supported by Silicon Labs' full suite of Simplicity Studio development tools, available to developers free of charge. To order Wireless Gecko samples and development kits, visit www.silabs.com/wirelessgecko.

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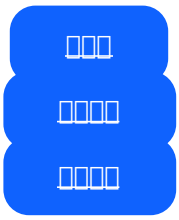

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