Silicon Labs Debuts Connected Home Solutions with Best-in-Class ZigBee and Thread-Ready Connectivity

Connected Lighting, Dimmable Light Switch, Contact Sensor and Smart Gateway Reference Designs Feature ZigBee "Golden Unit" HA 1.2 Stack

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AUSTIN, Texas--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leading provider of silicon and software solutions for a smarter, more connected world, today introduced a series of comprehensive reference designs that reduce time to market and simplify the development of ZigBee®-based home automation, connected lighting and smart gateway products. The first in a series of turnkey IoT solutions from Silicon Labs, the new reference designs include the hardware, firmware and software tools that developers need to create interoperable, scalable, feature-rich connected home products based on Silicon Labs' robust, industry-leading ZigBee "Golden Unit" Home Automation (HA 1.2) software stack and ZigBee system-on-chip (SoC) mesh networking technology.

"The connected home is one of the most attractive markets for wireless connectivity, driven by a number of compelling applications such as home automation and connected lighting, and it's growing quickly too," said Lee Ratliff, principal analyst for connectivity and IoT at IHS Technology. IHS forecasts that connected home device shipments will grow from 59 million units in 2015 to 193 million units in 2018, a compounded annual growth rate of more than 48 percent. According to Ratliff, successful connected home products must be standards-based, easy to deploy by mainstream consumers, and designed to work in real-world environments and solve specific problems with minimal complexity.

Silicon Labs created cost-effective reference designs to significantly reduce the complexity of connecting ZigBee devices, such as lights, dimmer switches and door/window contact sensors, in a connected home network. This design simplicity translates into exceptional ease of use for consumers who are increasingly purchasing "do-it-yourself" connected home products at leading home improvement retailers such as Home Depot and Lowes.

Silicon Labs' ZigBee connected lighting reference designs feature wireless lighting boards as well as a plug-in demo board suitable for quick demonstrations and testing. The Golden Unit ZigBee stack allows LED lights to reliably join, interoperate and leave a mesh network, as well as scale from a few to hundreds of light nodes on the same network. The connected lights can support white, color temperature tuning and RGB color settings as well as dimming.

Silicon Labs' ZigBee-based home automation reference designs include a capacitive-sense dimmable light switch and a small-form-factor door/window contact sensor. The light switch provides color, color tuning and dimming control capabilities that traditional switches cannot achieve. Unlike conventional switches, these wireless, battery-powered switches have no moving parts and are easy to place anywhere in a home. The switch design features Silicon Labs' EFM8 capacitive sensing MCU to detect different user gestures (touch, hold and swipe). The contact sensor reference design provides all the tools needed to create wireless, battery-powered sensors used to monitor door and window positions (open or closed) – a useful feature for automatically triggering room lighting.

Silicon Labs offers two ZigBee gateway options to complement the reference designs:

- A plug-and-play USB virtual gateway that works with any PC development platform and supports the Windows, OS X and Linux environments as a virtual machine
- An "out-of-the-box" Wi-Fi/Ethernet gateway reference design based on an embedded Linux computer system.

Both gateway options allow developers to control and monitor ZigBee HA 1.2 compliant end nodes through Wi-Fi with any device with a web browser, such as a smartphone or tablet. Using an intuitive, web-based user interface, developers can easily create rules between ZigBee end devices including lights, dimmable light switches and contact sensors.

The connected lighting and home automation reference designs support the following features:

- Silicon Labs' industry-leading EM358x mesh networking SoCs, combining an ARM® Cortex®-M3 processor core with a low-power 2.4 GHz 802.15.4 transceiver
- Low-power designs enabling very long battery life: up to three years for dimmable light switches and up to five years for contact sensors on a CR2032 coin-cell battery

- Silicon Labs' Golden Unit ZigBee PRO-certified software stack and ZigBee HA 1.2-certified applications, enabling interoperability with other HA 1.2-certified devices
- Over-the-air ZigBee updates and future-proof upgrades to Silicon Labs' Thread software
- Mesh networking capability scaling from tens to hundreds of nodes with individual selectivity, without costly rewiring of existing systems
- Best-in-class wireless development kit with configuration and debugging tools to simplify design, as well as packet trace port on EM358x SoCs for network signal debugging
- FCC/CE pre-certified hardware for easy system configuration and fast time to market
- Complete schematics, layout and bill of materials (BOM)

"Developers creating connected home products want simple, high-performance, battery-friendly solutions that make wireless design fast, easy and straightforward," said Greg Hodgson, senior director of IoT Solutions at Silicon Labs. "Our new connected lighting, home automation and ZigBee gateway reference designs meet these developer priorities, providing the most robust, easiest to use hardware/software solutions available."

As the ZigBee market share leader with 10+ years of experience in mesh networking, Silicon Labs has become a trusted partner for customers in the connected home market. Silicon Labs is a founding member of the Thread Group and the first to demonstrate a Thread network and deliver a Thread stack. While mesh networking solutions from other chip vendors often fall short in real-world applications, Silicon Labs' robust, field-proven software stacks enable connected devices to join mesh networks quickly and consistently and route messages reliably.

Pricing and Availability

Silicon Labs' connected lighting, home automation and smart gateway reference designs are available today. The RD-0020-0601 and RD-0035-0601 connected lighting reference designs are priced at $49. The RD-0030-0201 contact sensor reference design is priced at $39. The RD-0039-0201 capacitive-sense dimmable light switch reference design is priced at $29. The USB virtual gateway is priced at $49, and the out-of-the-box Wi-Fi/Ethernet gateway reference design is priced at $149. (All prices USD MSRP). To order the references designs and for additional information, please visit www.silabs.com/connectedhome.

Silicon Labs

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Contact:

Silicon Labs
Dale Weisman, +1-512-532-5871

dale.weisman@silabs.com

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