Silicon Labs Simplifies Wi-Fi Connectivity with Plug-and-Play Module Solution

February 23, 2016 11:00 AM EST

Pre-Certified WGM110 Wi-Fi Module with Antenna and Protocol Stack Enables Exceptional RF Performance, Smaller Footprint and Faster Time to Market

NUREMBERG, Germany--(BUSINESS WIRE)-- Silicon Labs (NASDAQ: SLAB) has introduced a plug-and-play Wi-Fi module solution for Internet of Things (IoT) applications where exceptional RF performance, small footprint, easy application development and fast time to market are key requirements. Silicon Labs' fully integrated Wizard Gecko WGM110 module solution combines all of the necessary elements required for robust IoT Wi-Fi connectivity including a high-performance 2.4 GHz 802.11b/g/n radio, integrated antenna, global certifications, an energy-friendly EFM32™ Gecko microcontroller (MCU), an embedded Wi-Fi stack, and multiple Internet protocols including TCP and UDP with TLS security.

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Wizard Gecko WGM110 Module Provides Plug-and-Play Wi-Fi Connectivity (Graphic: Business Wire)

The WGM110 module provides an ideal solution for adding Wi-Fi to industrial/M2M systems, wireless sensors, remote controls, thermostats, connected home products, automotive infotainment, point-of-sale devices, and fitness and medical equipment. The most widely available wireless protocol for the IoT, Wi-Fi is supported by laptops, mobile phones, tablets and countless connected "things," making it ideal for device-to-cloud or device-to-device connectivity to aggregate data or provision IoT devices without the need for complex networking infrastructure or dedicated hubs.

*Get all the details about Silicon Labs' WGM110 module including pricing and availability, Wi-Fi stack, development tools and data sheets at*www.silabs.com/wi-fi.

By integrating the 802.11 radio, antenna, MCU and Wi-Fi stack into a pre-certified solution, the WGM110 module helps developers reduce R&D risk and costs and greatly accelerate time to market. No RF or antenna design expertise is required to add Wi-Fi to connected devices; no RF testing equipment or tuning processes are needed during manufacturing. The WGM110 module meets key RF certifications worldwide including CE, FCC, IC and other regional certifications. The Wi-Fi and TCP/IP stack provides all essential secure connectivity functions and APIs, and Silicon Labs constantly tests the stack for interoperability with the latest wireless ecosystems.

The WGM110 module can serve as a Wi-Fi client or a Wi-Fi access point, making device provisioning as easy as surfing the web. The module includes Silicon Labs' BGScript™ scripting language, which can be used to develop and host end applications without relying on an external MCU, and it can run in a network co-processor mode, easing the complexity of TCP/IP networking and enabling the host controller to handle application tasks. The module also offers highly flexible hardware interfaces, simplifying connections to peripherals and sensors.

"The Wizard Gecko WGM110 module provides developers with the fastest path to native IoT connectivity," said Daniel Cooley, vice president of marketing for IoT products at Silicon Labs. "Our highly integrated, pre-certified module solution combines robust RF performance and a very small footprint with best-in-class development tools, enabling developers to focus on end applications instead of protocol issues, costly RF certification and production testing."

WGM110 Module Highlights

- Excellent -98 dBM receiver sensitivity and +16 dBm transmit power, enabling long-range connectivity (300-500 m typical)

- Small-footprint 14.4 x 21 x 2 mm module: up to 40 percent smaller than competitive options
- Ultra-low-power EFM32 Gecko MCU with 48 MHz ARM® Cortex®-M3 core
- High-performance 2.4 GHz IEEE 802.11 b/g/n transceiver
- Integrated high-efficiency chip antenna
- Extensive peripheral integration including UART, I2C, SPI and USB
- Robust Wi-Fi protocol stack including HTTP/TLS/TCP/IP protocols for cloud integration
- Software API compatible with Silicon Labs' existing WF121 module for easy migration
- SLWSTK6120A wireless SDK gets developers up and running in minutes
- Dedicated host interface to external MCUs running the end application
- BGScript language supporting standalone design or hosting applications on the module
- Worldwide application engineering support from Silicon Labs' connectivity experts

Simplifying Wi-Fi Development

The complimentary WGM110 wireless software development kit (SDK) includes all the tools needed to create IoT applications including BGScript for host or standalone operation and APIs for the network co-processor mode. The WGM110 module is the only solution available that implements Wi-Fi with scripting to host applications. Using a familiar BASIC-like syntax, BGScript enables developers to create Wi-Fi applications quickly without using external MCUs to run the application logic. The code can be executed on the WGM110 module, eliminating the need for an external MCU, which helps reduce cost and board space and speeds time to market.

Wi-Fi application profiles and examples, extensive documentation and an online community further accelerate application development. Developers can get started in minutes with the SLWSTK6120A wireless starter kit featuring the WGM110 module, main boards, temperature and humidity sensors, accelerometer, joystick, LEDs, push buttons, display and USB interface.

Pricing and Availability

Engineering samples of the Wizard Gecko WGM110 module are available today, and production parts are planned for Q2 2016. The WGM110 module is priced at $8.93 (USD) in 10,000-unit quantities. The SLWSTK6120A wireless starter kit is available now and priced at $129 (USD MSRP). To order WGM110 module samples and development kits, visit www.silabs.com/wi-fi.

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Silicon Labs

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