Silicon Labs Expands Sub-GHz Wireless Portfolio to Support 802.15.4/4g Connectivity

Next-Generation EZRadio® and EZRadioPRO® RF ICs Offer Highest Performance and Lowest Power for Emerging and Proprietary Protocols

> *" The sub-GHz connectivity market continues to evolve to support new and emerging wireless protocols that enable the Internet of Things "*

AUSTIN, Texas--(BUSINESS WIRE)--Silicon Labs (NASDAQ: SLAB), a leading provider of wireless connectivity solutions for the Internet of Things, today introduced next-generation EZRadio® and EZRadioPRO® wireless ICs offering industry-leading power efficiency, wireless range and flexibility. Operating in the sub-GHz band, the new Si4x55 EZRadio and Si4x6x EZRadioPRO families support a variety of proprietary, legacy and emerging protocols including IEEE 802.15.4/4g, Wireless M-Bus and Wi-SUN. The EZRadio and EZRadioPRO families provide a versatile, high-performance multiprotocol wireless connectivity platform for a wide array of IoT applications including wireless sensor networks, industrial M2M communication, remote controls, security systems and smart meters.

Silicon Labs' new EZRadio and EZRadioPRO families offer the highest levels of RF performance and single-chip integration in the sub-GHz wireless IC market. These sub-GHz wireless ICs provide best-in-class performance specifications including transmit output power (up to +20 dBm for EZRadioPRO), sensitivity (-116 dBm for EZRadio and -133 dBm for EZRadioPRO) and link budget (153 dB).

Ideally suited for battery-powered wireless applications, the EZRadio and EZRadioPRO devices provide the industry's lowest standby current of 40 nA with memory retention, consuming up to 75 percent less sleep mode current than competing solutions. Each device includes a patent-pending signal arrival detector that reduces the average receiver current by detecting a signal faster than traditional sub-GHz receivers, effectively increasing the battery life for various applications. Featuring a high-efficiency integrated power amplifier (PA) consuming only 18 mA at 10 dBm, these energy-friendly sub-GHz radios can operate on a single coin cell battery, and they are well suited for smart meter designs that require long-range and up to 20-year battery lifetime. Autonomous duty cycling between active and low-power modes and advanced features such as frequency hopping and antenna diversity minimize host MCU interaction and further reduce overall system power consumption.

Silicon Labs' sub-GHz radios support a wide variety of proprietary protocols through flexible on-chip packet handler and modem technology. EZRadio devices handle most basic packet formats, while EZRadioPRO devices are designed for more complex packet formats. The flexible architecture offloads the host microcontroller (MCU) without sacrificing RF performance. EZRadio and EZRadioPRO devices can support a protocol stack such as an 802.15.4-based mesh network or a point-to-point or star network in conjunction with a Silicon Labs 8-bit MCU or a 32-bit EFM32® Gecko MCU serving as the external host.

Si4x55 EZRadio transceivers, transmitters and receivers provide cost-effective, easy-to-use wireless connectivity solutions for basic "push-button" applications such as remote controls for set-top boxes, bidirectional key fobs and garage door openers. Configurations include simple point-to-point or star networks with standard packet formats. Covering the 283-525 MHz and 850-960 MHz frequency bands, EZRadio devices provide excellent communication range for indoor applications, industry-leading power efficiency, superior blocking and phase noise performance. Available in the smallest package size in the sub-GHz market (3 mm x 3 mm), EZRadio devices are suitable for any space-constrained wireless design.

Si4x6x EZRadioPRO transceivers, transmitters and receivers are an excellent choice for developers requiring advanced features, higher RF performance and a wider range of protocol options. They are ideal for ultra-long-range, narrowband applications using complex, advanced packet formats and network protocols. The devices are designed to meet stringent regulatory and standards compliance requirements including FCC part 90 Mask D, ETSI Category-I, ARIB T108, Wireless M-Bus and IEEE 802.15.4/4g options. The Si4461 EZRadioPRO transceiver recently received Wi-SUN certification from a leading sub-GHz wireless module partner in Japan, highlighting compliance with IEEE 802.15.4g.

"The sub-GHz connectivity market continues to evolve to support new and emerging wireless protocols that

enable the Internet of Things," said Daniel Cooley, vice president of MCU and wireless products at Silicon Labs. "As a leading supplier of high-performance, ultra-low-power wireless connectivity solutions for the IoT, Silicon Labs has been at the forefront of the sub-GHz radio market for many years. We designed our latest generation of EZRadio and EZRadioPRO devices to meet demanding application requirements such as longer battery life, increased wireless range and the flexibility to handle multiple protocols in a single, cost-effective RF IC."

While many high-performance RF ICs can be difficult to configure, Silicon Labs has simplified sub-GHz wireless design with its easy-to-use, GUI-based Wireless Development Suite (WDS). Available at no charge from Silicon Labs' website, WDS software eliminates the complex manual configuration process needed for most RF designs, saving time and effort often required to calculate and verify radio parameters. Developers simply select from predefined, optimized example code, or they can easily set up their own customized configurations.

Pricing and Availability

Samples and production quantities of the Si4x55 EZRadio and Si4x6x EZRadioPRO products are available now. Pricing for the Si4x55 EZRadio family begins at $1.02 in 10,000-unit quantities, and Si4x6x EZRadioPRO pricing begins at $1.10 in 10,000-unit quantities (all prices in USD). To help accelerate development, Silicon Labs offers EZRadio and EZRadioPRO development kits using a common set of C8051F930-based MCU motherboards and RF Pico boards. EZRadioPRO development kits (4461C-868-PDK, 4463C-915-PDK and 4438C-490-PDK) are priced at $299.00. EZRadio development kits (4455C-915-PDK, 4455C-868-PDK and 4455C-434-PDK) are priced at $199.00 (USD MSRP). For more information about Silicon Labs' EZRadio and EZRadioPRO wireless ICs and to purchase samples and development tools, please visit www.silabs.com/wireless.

Silicon Labs

Silicon Labs (NASDAQ: SLAB) is a leading provider of silicon, software and system solutions for the Internet of Things, Internet infrastructure, industrial automation, consumer and automotive markets. We solve the electronics industry's toughest problems, providing customers with significant advantages in performance, energy savings, connectivity and design simplicity. Backed by our world-class engineering teams with unsurpassed software and mixed-signal design expertise, Silicon Labs empowers developers with the tools and technologies they need to advance quickly and easily from initial idea to final product. www.silabs.com

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Contact:

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

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