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Silicon Labs Delivers First Complete Wireless M-Bus Solution for European Market

Platform Solution for Smart Metering Combines Wireless M-Bus Stack, Starter Kits, and Rich Set of Wireless MCU, Transceiver and 32-bit MCU Options

AUSTIN, Texas--(BUSINESS WIRE)-- Silicon Labs (NASDAQ: SLAB), a leading provider of wireless connectivity solutions for the Internet of Things (IoT), today introduced the industry's first complete Wireless M-Bus platform solution designed to simplify the development of wirelessly connected smart meters for electricity, gas, water and heat resources in the European market. Silicon Labs' comprehensive smart metering solution includes the Wireless M-Bus software stack and wireless starter kits to speed time to market. The Wireless M-Bus solution is portable across Silicon Labs' wide array of energy-friendly ARM®-based microcontrollers (MCUs) and sub-GHz wireless ICs, and it supports all modes for smart metering in Europe including the popular 169 MHz N modes.

The open Wireless M-Bus protocol provides a proven, easy-to-deploy wireless connectivity solution for smart metering and smart grid applications. Based on the EN13757-4/3 European standards, Wireless M-Bus specifies seamless sub-GHz RF communication between smart utility meters, data concentrators, mobile readout devices and heat cost allocators. Wireless smart meter applications require long life for battery-powered meters such as water, gas and heat meters. To address this need, the Wireless M-Bus protocol requires very little overhead for the small amounts of data used by meters, enabling battery life of up to 15-20 years. Proven over the past several years in numerous field tests and deployments in many countries, Wireless M-Bus has become a widely accepted standard for smart metering in Europe.

The most complete Wireless M-Bus solution available today, Silicon Labs' Wireless M-Bus platform solution covers all region-specific requirements throughout Europe. The software stack complies with the Wireless M-Bus specification (EN13757-4), the Wireless M-Bus Application Layer (EN13757-3) and the Application Layer of the Open Metering System (OMS) Group. The stack supports a wide range of modes at 868 MHz and 169 MHz, from the physical layer to the application layer. Supported modes include T1, T2, S1, S1-M, S2, C1, C2, N1 and N2 (a-g), with ultra-fast preamble detection for the N modes without sacrificing RF performance.

"As a leading supplier of sub-GHz connectivity solutions for the Internet of Things, Silicon Labs has developed field-proven expertise in Wireless M-Bus technology for the European metering market," said Daniel Cooley, vice president and general manager of Silicon Labs' microcontroller and wireless products. "We've channeled our smart metering application knowledge into the industry's most comprehensive, standards-based Wireless M-Bus platform solution, enabling developers to simplify and accelerate their smart meter designs for rapid deployment across Europe."

"We are proud to partner with a leading semiconductor provider such as Silicon Labs on a very complete Wireless M-Bus platform solution," said David Rahusen, managing director of STACKFORCE GmbH. "Silicon Labs' high-performance solution based on an optimized modular stack architecture developed by STACKFORCE serves as an excellent platform for an efficient, easily adaptable and scalable Wireless M-Bus solution."

The Wireless M-Bus platform solution is optimized for modularity and scalability, high RF performance, ultra-low power and a small memory footprint (as small as 32 KB flash depending on mode and device type). The software stack provides application programming interface (API)-based access for both application and extended data link layers. The stack also includes an optional serial command interface to enable control of the Wireless M-Bus software from an external host processor. Unlike competing solutions, Silicon Labs' Wireless M-Bus platform uses a hardware AES encryption engine to provide security for metering systems.

The Wireless M-Bus solution's modular architecture features an open hardware abstraction layer (HAL), providing developers with complete flexibility to select the optimal Silicon Labs MCU and sub-GHz RF devices to meet the performance, cost and size requirements of their metering applications. The Wireless M-Bus software is available in binary/object code format for Silicon Labs' 32-bit EZR32 sub-GHz wireless MCUs, as well as a combination of EZRadioPRO sub-GHz RF transceivers and the entire 32-bit EFM32 Gecko MCU portfolio.

The Wireless M-Bus software package includes a quick start guide, complete API documentation, precompiled libraries (for ARM Cortex-M0+, M3 and M4 cores), and PC tools to configure a meter or collector with a demo application. Silicon Labs provides EZR32 starter kits optimized for the developer's desired frequency bands: 868 MHz (SLWSTK6220A) and 169 MHz (SLWSTK6224A). The Wireless M-Bus Quick Start Guide provides all the essential information developers need to get started with their metering applications. Silicon Labs also offers additional Wireless M-Bus design files including schematics, bill of

materials (BOM) and layouts including +27 dBm designs for the Italian market.

Pricing and Availability

Metering system developers can download Silicon Labs' Wireless M-Bus software stack at no charge from the company's website. The SLWSTK6220A and SLWSTK6224A EZR32 starter kits are available now and priced at $299 (USD MSRP). For more information about Silicon Labs' Wireless M-Bus platform solution, to download the software stack and quick start guide, and to order starter kits, visit www.silabs.com/wirelessmbus.

STACKFORCE GmbH

STACKFORCE GmbH is a German specialist in embedded connectivity solutions that offer services and solutions for efficient, secure, wireless and wired communication. Cornerstones of the company's activities include embedded solutions for the Wireless M-Bus Stack (EN13757-4, OMS, DSMR), 6LoWPAN and TLS1.2. www.stackforce.de.

Silicon Labs

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

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