



Cypress and Semtech Collaborate on Integrated LoRaWAN™ Solution for Smart City Applications

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Two-chip Module Delivers Long Range, Ultra-low Power, Security and BLE Connectivity

VANCOUVER, British Columbia--(BUSINESS WIRE)--Jun. 6, 2018-- **LoRa Alliance 10th ALL MEMBERS MEETING** – Cypress Semiconductor Corp. (NASDAQ: CY), a leader in embedded solutions and a LoRa Alliance™ member, today announced it has collaborated with Semtech Corporation (Nasdaq: SMTC) on a compact, two-chip LoRaWAN™-based module deployed by Onethinx. The highly-integrated [Onethinx module](#) is ideal for smart city applications that integrate multiple sensors and are in harsh radio environments. Using Cypress' [PSoC® 6](#) microcontroller's (MCU) hardware-based Secure Element functionality and Semtech's LoRa® devices and wireless radio frequency technology (LoRa Technology), the solution enables a multi-layer security architecture that isolates trust anchors for highly protected device-to-cloud connectivity. In addition, the PSoC 6 MCU's integrated Bluetooth® Low Energy (BLE) connectivity provides a simple, low-power, out-of-band control channel. The PSoC 6 device is the industry's lowest power, most flexible Arm® Cortex®-M dual-core MCU with a power slope as low as 22-µA/MHz active power for the Cortex-M4 core. The device is a natural fit with Semtech's latest [LoRa radio chip family](#), which offers 50% power savings in receive mode and 20% longer range over previous-generation devices.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20180606005455/en/>



Security is a primary concern for many smart city applications. The Onethinx module utilizes the integrated Secure Element functionality in the PSoC 6 MCU to give each LoRaWAN-based device a secret identity to securely boot, on-board, and deliver data to the cloud application. Using its mutual authentication capabilities, the PSoC 6 MCU-based, LoRa-equipped device can also receive authenticated over-the-air firmware updates. Key provisioning and management services are provided by IoT security provider and member of the Bosch group, ESCRYPT, for a complete end-to-end, secure LoRaWAN solution. The module, offered by Cypress partner Onethinx, connects to Bosch Sensortec's Cross Domain Development Kit (XDK) for Micro-Electromechanical Systems (MEMS) sensors and to the provisioning system from ESCRYPT to securely connect.

"With its long range and low power capabilities in a compact footprint, Semtech's LoRa Technology is ideal for vertical applications," said Vivek Mohan, Director of IoT in Semtech's Wireless and Sensing Products Group. "Combining LoRa Technology with Cypress' PSoC 6 MCU in a purpose-built IoT module will accelerate the delivery of leading-edge IoT solutions for smarter cities and a smarter planet."

Pictured is a module by Onethinx for smart city applications featuring Cypress' PSoC 6 BLE microcontroller and Semtech's LoRaWAN technology. (Graphic: Business Wire)

"Devices for LoRaWAN networks need to be secure to protect the data they generate and process," said Jack Ogawa, senior

director of marketing for the MCU business unit at Cypress. "We're excited to work with LoRaWAN ecosystem members to offer developers the unique combination of secure PSoC 6 MCUs and Semtech's new lower power, longer range LoRa Technology to address smart city applications."

The new solution will be showcased at the LoRa Alliance 10th Annual All Members Meeting from June 6-7 in Vancouver, Canada.

About PSoC 6

PSoC 6 is the industry's lowest power, most flexible MCU with built-in Bluetooth Low Energy wireless connectivity and integrated hardware-based security in a single device. Software-defined peripherals can be used to create custom analog front-ends (AFEs) or digital interfaces for innovative system components such as electronic-ink displays. The architecture offers flexible wireless connectivity options, including fully integrated BLE 5.0.

The PSoC 6 MCU architecture features the latest generation of Cypress' industry-leading CapSense® capacitive-sensing technology, enabling modern touch and gesture-based interfaces that are robust and reliable. The architecture is supported by Cypress' PSoC Creator™ Integrated Design Environment (IDE) and the expansive Arm ecosystem. Designers can find more information on the PSoC 6 MCU architecture at <http://www.cypress.com/PSoC6>.

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About Cypress

Cypress is the leader in advanced embedded solutions for the world's most innovative automotive, industrial, smart home appliances, consumer electronics and medical products. Cypress' microcontrollers, analog ICs, wireless and USB-based connectivity solutions and reliable, high-performance memories help engineers design differentiated products and get them to market first. Cypress is committed to providing customers with the best support and development resources on the planet enabling them to disrupt markets by creating new product categories in record time. To learn more, go to www.cypress.com.

About Semtech

Semtech Corporation is a leading supplier of high performance analog and mixed-signal semiconductors and advanced algorithms for high-end consumer, enterprise computing, communications, and industrial equipment. Products are designed to benefit the engineering community as well as the global community. The Company is dedicated to reducing the impact it, and its products, have on the environment. Internal green programs seek to reduce waste through material and manufacturing control, use of green technology and designing for resource reduction. Publicly traded since 1967, Semtech is listed on the Nasdaq Global Select Market under the symbol SMTC. For more information, visit www.semtech.com.

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