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STMicroelectronics Hails Success of Advanced Single-Chip Integration in New Wireless Modules from SenseAnywhere

Tiny single-chip balun, together with ultra-efficient sensor and memory, helps boost performance and shrink dimensions of new AiroSensor and AssetSensor active-RFID modules from SenseAnywhere

Geneva, June 16, 2014 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has announced that SenseAnywhere, a leader in tags and modules for wireless sensing and location, has qualified the world's first wireless devices incorporating ST's new single-chip balun, which integrates essential circuitry for radio systems in a footprint of only 2.1mm².

The SenseAnywhere AiroSensor and AssetSensor active-RFID modules combine advanced RF transceiver technology with a low-power processor, low-voltage EEPROM, and miniature temperature, humidity, and ultra-efficient motion sensors to enhance performance and save cost in Internet of Things (IoT) applications such as environmental monitoring, cold-chain compliance, theft protection, and asset tracking.

“The cooperation with ST made it possible to realize significant improvements in the output performance, sensitivity and impedance matching of our RF modules and sensors, as well as minimizing unwanted harmonics,” said Tom Heijnen, Founder and Managing Director of SenseAnywhere. “At the same time, we have seriously reduced overall application size as well as savings in bill-of-materials costs and reduced assembly and test costs.”

Inside the SenseAnywhere modules, ST's BAL-CC1101-01D3 balun balances the connection between the radio and antenna, replacing discrete components that would occupy up to 30mm² of pc-board space with a single 2.1mm² integrated circuit. Moreover, single-chip integration enables closer impedance matching, greater stability, and reduced device-to-device spread by minimizing variations between circuit features on the same silicon substrate.

The [BAL-CC1101-01D3](#) is the first in a new family of integrated baluns from ST, which are matched to specific RF-transceiver chipsets. Optimized for ultra-low-power applications in sub-GHz Industrial, Scientific and Medical (ISM), and Short-Range

Device (SRD) frequency bands, the ETSI¹- and FCC²-compliant BAL-CC1101-01D3 delivers advantages including an integrated harmonic filter delivering improved harmonic attenuation, low insertion loss, and operation up to 85°C, in addition to its tiny footprint.

“The advanced single-chip integration of our new balun family helps customers overcome significant RF-system design challenges to deliver higher-performing products while reducing cost and time to market,” said Richard Renard, Senior Product Marketing Engineer, STMicroelectronics. “SenseAnywhere’s AiroSensor and AssetSensor using the ST balun are genuinely advanced products that offer unique benefits to integrators of sensing and location systems.”

Beyond the new balun, ST contributed its compact, flexible, and lowest-power LIS2DH accelerometer, and low-power EEPROMs to the SenseAnywhere IoT modules, ensuring long-lasting and accurate performance.

The [BAL-CC1101-01D3](#) is now available for production orders, in the 2.1mm² flip-chip package, priced from \$0.26 for orders of 5000 pieces.

About SenseAnywhere

[SenseAnywhere](#) develops and markets wireless transceiver modules, sensor-enabled active RFID tags, wireless sensors and data loggers that easily connect to any application through the Internet.

The company’s technology and devices enable customers to realize real-time location systems using Active RFIDs, sensor-enabled active RFIDs and wireless data loggers for amongst others motion, temperature and humidity.

Years of RF, analog and digital engineering has led to an ultra-low-power RF transceiver platform that is extremely easy to use. The complete RF-protocol handling and network management is integrated on the modules and AccessPoints. No pairing or key management are required, and all network components are plug and play. The ultra-low-power technology enables SenseAnywhere to create active RFID devices, sensors and data loggers like the AssetSensor and the AiroSensor that will operate autonomously in the field for 10 years.

With more than 15 years of experience in developing wirelessly networked products and communication protocols for business to business customers, SenseAnywhere’s network technology has been proven in tens of thousands of products, and will be at

¹ European Telecommunications Standards Institute

² The US Federal Communications Commission

the heart of numerous innovative products and equipment joining the Internet of Things.

About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2013, the Company's net revenues were \$8.08 billion. Further information on ST can be found at www.st.com.

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