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## Semtech Adds Low-Power 300MHz-510MHz Transceiver and Receiver To ISM Band RF Platform

With a Receive Current up to Six Times Lower than Competition, SX1212 and SX1213 Give Semtech Low Power (<3mA) Solutions for Entire ISM RF Band

Camarillo, California - August 4, 2009

Semtech Corp. (Nasdaq: SMTC), a leading supplier of analog and mixed-signal semiconductors, today announced the SX1212 UHF transceiver and SX1213 UHF receiver, two new devices in the company's RF solutions platform that boast the industry's lowest receive current consumption.

The SX1212 is a single-chip transceiver that operates in the 300MHz to 510MHz frequency range with a receive current of only 2.5 mA (typ). The SX1213 is a single-chip receiver for the same frequency range and with the same low receive current level. Both devices are designed for wireless alarm, security, sensors network in home automation and automated meter reading applications.

The receive current of the SX1212 and SX1213 is five to six times better than competing devices meaning customers can increase the operating cycle of the radios in their designs which reduces latency and improves response time. These elements are critical in security applications where a reduced operating cycle can mean missed alarm events.

The new devices allow customers to turn to Semtech for low-power RF solutions spanning the entire industrial, scientific and medical (ISM) RF band. They complement the SX1211, a transceiver that operates in the 863-960 MHz frequency range and features a receive current of less than 3.0 mA. All of the products are pin compatible.

"The low receive current of the SX1212 and SX1213 removes a limiting factor to innovation in the wireless control industry, which we think will lead to breakthrough systems that make use of a high receiver on time," said Marc Pégulu, Semtech Industrial Analog product line manager. "For example, next generation energy harvesting solutions can leverage these devices in motion detectors and wireless remote controls to provide improved lighting smart controls that can optimize light levels for a perfect balance of energy consumption and productivity."

The SX1212 and SX1213 are fully regulated to deliver a consistent RF range as the battery voltage decreases over time. This eliminates the cost and board space needed for external power management. For outdoor applications in extreme conditions, both devices leverage improved Semtech technology to deliver stable RF performance across a -40°C to +85°C temperature range.

Both devices incorporate a baseband modem with data rates up to 200 Kbit/s. Data handling features include a sixty-four byte FIFO, packet handling, automatic CRC generation and data whitening. All major RF communication parameters are programmable and most of them may be dynamically set. Both devices comply with European (ETSI EN 300-220 V2.1.1) and North American (FCC part 15.247 and 15.249) regulatory standards.

With support for both frequency-shift keying (FSK) modulation and on-off keying (OOK) modulation, the SX1212 and SX1213 can be used in new and legacy sensor network designs. The devices support FSK data rates from 1.56 to 200 Kbit/s and OOK data rates up to 32 Kbit/s. Receiver sensitivity for FSK modulation is -104 dBm at 25 Kbit/s and for OOK is -110 dBm at 2 Kbit/s.

The low receive current of the SX1212 and SX1213 lets designers specify lower capacity and lower cost batteries. The components also contribute to green solutions by extending useful battery life resulting in fewer battery replacements.

### Key Features of the SX1212 and SX1213

Low Rx power consumption: 2.5mA

RSSI (Received Signal Strength Indicator) range from Rx noise floor to 0 dBm Bit rates up to 200 kb/s, NRZ coding On-chip frequency synthesizer Incoming sync word recognition and packet handling with CRC.

Built-in Bit-Synchronizer for incoming data and clock synchronization and recovery Low Battery Detector

5 x 5 mm TQFN package

Optimized Circuit Configuration for Low-cost applications Pricing and Availability The SX1212 (order code: SX1212IWLTRT) is available immediately in production quantities and is priced at \$1.89 each in 3,000-piece lots. The SX1213 (order code: SX1213IWLTRT) is available immediately in production quantities and is priced at \$1.89 each in 3,000-piece lots. Semtech offers comprehensive design assistance, including field- and factory-based support. Wireless Star Network source code is available from Semtech Website. Data sheets, volume pricing, and delivery quotes, as well as evaluation kits and samples, are available by contacting [info@semtech.com](mailto:info@semtech.com).

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