Tranceiver ideal for high bit rates

Semtech Corporation expanded its RFIC platform with the new SX1257, a low power digital I/Q RF multi-mode PHY transceiver. The SX1257 is the first available solution to support all mandatory and optional IEEE 802.15.4g PHY modes including orthogonal frequency division multiplexing (OFDM). It is the ideal solution for customers desiring higher bit rates with complex modulation schemes such as OFDM in the sub-GHz band for smart metering applications.

The SX1257 is designed for high performance and flexibility with a high level of integration. It is a generic RF front-end designed to support several constant and non-constant envelope modulation schemes such as MR-FSK, MR-OFDM, and MR_OQPSK. A simple 4-wire 1-bit digital interface is provided for RX and TX I/Q data, which provides maximum flexibility. The receiver integrates the RF balun and 70dB of gain control with exceptional noise figure (NF). The TX chain is highly linear with a +6dBm 1dB compression point to support non-constant envelope modulation schemes.

The SX1257 can operate in both half and full-duplex mode and covers the frequency band from 862-950MHz. It is fully compliant with ETSI, FCC and ARIB regulatory requirements.

The SX1257 offers both flexibility and high performance for applications desiring alternative modulation schemes to FSK and OOK,² said Hardy Schmidbauer, Director of Wireless Products. ³It solidifies Semtech¹s position as a top-supplier in smart metering applications.

Pricing and Availability
The SX1257 (order code: SX1257IWLTRT) is available immediately in production quantities and is priced at $1.80 each in 10,000 piece lots. Semtech offers comprehensive design assistance, including field and factory-based support. Data sheets, volume pricing, and delivery quotes, as well as evaluation kits and samples, are available at www.semtech.com/info [1].

Semtech Corp,
www.semtech.com [2]

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