

Chip Delivers Reliable Communications for Smart Grid Applications



Semitech Semiconductor today announced the availability of the SM2101 -- an FSK/BPSK based power line transceiver. The SM2101 represents the next generation of power line communication transceivers, and is designed with an emphasis on Advance Metering Infrastructure (AMI) and Automated Meter Reading (AMR) applications, where low cost and high performance features are required. In addition, the SM2101 is able to meet the cost demands of high volume smart grid products such as residential meter communication -- with the added benefit of operating reliably in notoriously noise prone smart grid environments.

The SM2101 utilizes the ultra reliable and versatile power line transceiver components of the proven SM6401, while eliminating the embedded Flash and application microcontroller (MCU) to provide a more cost effective solution for high volume PLC applications on low or medium voltage power line networks.

"Though power line communication is favored by utilities because it is the most natural approach, and allows the utilities to move data over an infrastructure that they control, communicating over the power grid has been notoriously difficult, due to noise," noted Mike Holt, vice president of marketing and sales for Semitech. "Recognizing this, Semitech is highly focused on producing chips that enable the reliable, cost effective communication that is required for power meters, concentrators and other high volume smart grid products to 'talk' to each other. Semitech's SM2101 represents the lowest cost, highest reliability power line communications solution available today."

The SM2101 contains a complete packet data modem with the network protocol of

Chip Delivers Reliable Communications for Smart Grid Applications

Published on Electronic Component News (<http://www.ecnmag.com>)

ANSI/IEC 709.1/2 standards, allowing the development of popular narrow band PLC networks. When combined with a microcontroller (MCU), it provides a cost effective solution for data links and point-to-point, star or ad hoc networks. The SM2101 is the modem only version of the SM6401 Power Line Communication (PLC) transceiver, which utilizes the reliable and versatile power line transceiver components of the SM6401 while eliminating the embedded Flash and application microcontroller (MCU). This provides a cost effective solution for high volume PLC applications on low or medium voltage power line networks, for applications including smart metering and home automation.

The SM2101's unique capabilities include:

Choice of two communication frequencies on which to transmit and receive data from a list of eight factory preset frequencies to avoid interference on the power line

User selectable between BPSK modulation for noise immunity and compatibility to ANSI/EIA 709.1 and ANSI/EIA 709.2 devices and FSK modulation, to allow high immunity to the phase distortion

Approximates the amount of noise on a frequency by direct measurement and the signal strength of received packets

Supports CENELEC A, B and C band operation

Receiver sensitivity of -80dBV

The SM2101 is now sampling. For more information, visit www.semitechsemi.com [1].

Source URL (retrieved on 07/12/2014 - 10:41am):

<http://www.ecnmag.com/products/2010/12/chip-delivers-reliable-communications-smart-grid-applications>

Links:

[1] <http://www.semitechsemi.com>