semitech semiconductor

TURNING THE GRID GREEN

COMPANY OVERVIEW

About Semitech

Semitech Semiconductor provides the semiconductor devices that enable the transformation of the electricity grid into a smart grid. By connecting utilities to their customers, Semitech's chips help to transform homes into energy-aware "smart homes" that react to conditions on the grid, thus implementing a worldwide communications network based on the existing power grid.

Semitech is headquartered in Singapore with a design center in Melbourne, Australia.

Mission

Dominate the market for power line communications semiconductor products by enabling interoperable, reliable, robust communication in noisy power line environments.

Innovations

Critical to power line communications is the ability to implement multiple daily remote meter readings reliably in noisy environments. Semitech's technology enables this:

- Programmable signal processing technology that adjusts speed and frequency automotically
- Automatically choses the most effective transmission frequency
- Interoperable protocols such as EIA709.1.
- Highly secure DES encryption/decryption

Products

Semitech's family of PLC devices delivers a range of solutions and bandwidth for smart grid communications. Semitech's products have consistently proven to be the most robust solution for broad deployment in the harsh power grid environments. The SM6401, Semitech's flagship product, is a System-on-a-Chip (SoC) for a single-chip solution to many smart grid applications. Along with the power line transceiver, it integrates a 32 bit processor, 64Kbytes Flash, a Real Timer Clock (RTC), 40 IOs, SPI, 2 UARTs & other peripherals into a single chip. This is the most integrated solution in the industry.

Markets

Power generation and distribution is seeing direct government investment worldwide as a core "green" initiative to mitigate growth in power generation needs and reduce carbon emission. These "green energy" investments were estimated to be nearly $50B in China and the U.S. alone in 2009. Many of these investments fall under the broad label of "Smart Grid" with the common element being basic communication infrastructure to measure and control the elements of the grid. For example, there are over one billion electricity meters worldwide and planned Automated Meter Reading (AMR/AMI) rollouts are estimated to total approximately 100 million meters per year over the next five years. Each of these meters requires communications and the most natural medium is the power line to which they are already connected. Such energy directives and smart grid funding dollars are driving hundreds of power line communications initiatives worldwide.

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