HART Modem IC is Asserted to Require the Lowest Power in the Industry

Analog Devices introduced a complete HART (Highway Addressable Remote Transducer) modem IC that enables HART connectivity in process control applications such as smart sensors and factory automation equipment. The single-chip device requires the lowest power in the industry, according to the company, and it is fully compliant with the HART Communication Protocol. The AD5700 HART modem IC is compliance registered with the HART Communication Foundation and accurately encodes and decodes HART communication signals in noisy, harsh industrial environments, ensuring a reliable communication interface. The new modem IC requires less external support components and incorporates an internal low-power 0.5 percent accurate oscillator, internal receive filtering and an internally buffered HART output, providing a greater than 75 percent saving in board area over competing products, according to the company. The device is asserted to consume 38 percent less power than alternative solutions, and this power savings enables system engineers designing smart sensor applications to reduce their power budgets, lower system costs and optimize board space to accommodate supplementary functionality, according to the company.

The AD5700 HART modem IC is designed to interface easily with ADI’s innovative portfolio of data converters for industrial applications, such as the AD5755 D/A converter for analog I/O modules and the AD5421 D/A converter for loop-powered smart transmitter applications. ADI has also developed a fully functional smart transmitter demo system featuring the AD5700 HART modem IC that is compliance tested, verified and registered with the HART Communication Foundation as an approved HART solution.

AD5700 HART Modem IC Key Features and Benefits

Integrates in a single chip all the necessary filtering, signal detection, modulation, demodulation and signal generation functions needed to achieve HART connectivity, so designs require few external support components.

Integrated, low power, 0.5 percent accurate oscillator is a compact alternative to a discrete crystal.

Meets the industry standard for physical layer protocols set by the HART.

Communication Foundation and simplifies design challenges by accounting for all physical layer requirements.

Specified for a wide industrial temperature range of –40°C to +125°C, enabling use in high and low temperature environments.

Analog Devices
800-262-5643, www.analog.com
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Links:
[1] http://www.analog.com