Microchip Technology’s new wireless rfHCS362 encoders integrate a built-in radio frequency (RF) transmitter with the company’s highly secure KeeLoq® access control system.

Providing both standard, as well as new enhanced KeeLoq features, the rfHCS362G and rfHCS362F are single-package, low-cost authentication devices that require minimal external components for operation. The devices offer designers an easy “no code development required” system solution for secure authentication.

The rfHCS362G/362F encoders offer a programmable 32-bit serial number and two 64-bit user-programmable encryption keys for secure identification. The KeeLoq code hopping technology makes each transmission unique, thereby eliminating the threat of capture and re-send schemes while the length of the transmission eliminates the threat of code scanning.

The device features button queuing (to increase the number of functions and enable a single button to perform multiple functions), Manchester and Pulse Width Modulation (PWM) encoding, and timing output bits to determine how long a button was pressed. Programmable time-out options, programmable data rates and code word blanking options, a tunable oscillator and low voltage detector are additional features.

Designed for battery operation, the devices feature low standby power consumption (less than 1uA) to improve battery life, low operating voltage of 2.2V, and a direct LED drive that also indicates low battery voltage.

APPLICATIONS

Targeted applications include electronic door locks, garage door openers, remote keyless entry (RKE), burglar alarm systems, property identification, remote control, auto immobilizers and theft protection.

The rfHCS362G features an integrated 310-440 MHz Amplitude Shift Key (ASK) transmitter and the rfHCS362F features a Frequency Shift Key (FSK) transmitter in the same frequency range. Both devices feature adjustable output power (-12dBm to +2dBm) and a voltage controlled oscillator (VCO) phase locked to a quartz crystal reference to allow implementation of a narrow receiver bandwidth to maximize range and interference immunity even at extremely low RF power levels.

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The 18-pin SOIC rfHCS362G costs $2.14 each and the 20-pin SSOP rfHCS362F costs $2.24 each in 1,000-unit quantities. Samples are available now and volume production is scheduled for April.

Several application notes on KeeLOQ designs are also available on Microchip’s website. Microchip’s KeeLOQ Evaluation Kit and the PRO MATE® II device programmer support the rfHCS362G/362F devices.

Datasheets for the devices can be found at www.microchip.com/KEELOQ

For more information on these new devices, contact any Microchip sales representative or authorized worldwide distributor or visit www.microchip.com.

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