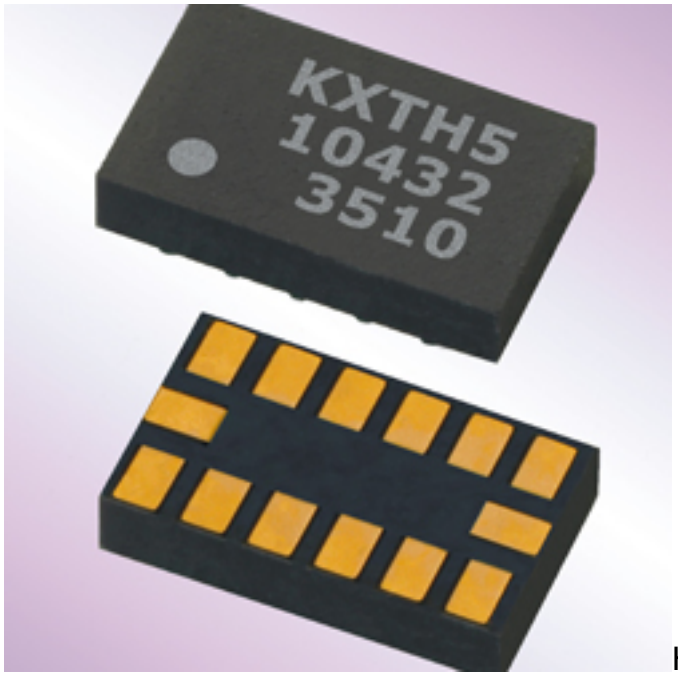
Tri-axis Accelerometer Speeds Multiplexed Switching for HDD Protection



Kionix announced a tri-axis analog accelerometer that improves multiplexed switching for hard-disk-drive (HDD) protection by 400 percent over its predecessor, the KXPB5. The new KXTH5 boosts the speed at which the hard disk drive can detect a “drop,” thereby increasing system robustness. The KXTH5 features an integrated four-channel multiplexer that decreases system microcontroller (MCU) requirements to one analog-to-digital converter (ADC) and two digital I/O’s; a very high sampling rate of 32 kHz per axis that, when combined with the short 5 µs settling time of the integrated multiplexer, is asserted to match the performance of three separate analog outputs; a high signal-to-noise ratio with desirable performance over temperature, improving resolution of motion; low noise density that improves resolution and accuracy; low power consumption of 350 µA when operating and 5 µA on standby; customizable operation at any value between 1.8V and 3.6V DC, programmed at the factory to function correctly at the customer-specified voltage; factory-programmable sensitivity that allows a customization range at any value between ±1.5 g to ±6 g, tailoring the function to the customer’s application; and noise management with factory-programmable options for a switched-capacitor low-pass filter or no low-pass filter.

Kionix
607-257-1080, www.kionix.com [1]

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