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Analog Devices' 3-axis High-g MEMS Accelerometer Enables Highly Accurate Impact, Shock, and Concussive Detection Systems

ADI's ADXL375 200-g digital MEMS accelerometer delivers more than twice the bandwidth at less than half the power consumption of competing sensors used to measure high-g events.

NORWOOD, Mass.--(BUSINESS WIRE)-- Analog Devices, Inc. (ADI), a global leader in high-performance semiconductors for signal processing applications, today introduced a 3-axis, 200-g digital MEMS (micro-electro-mechanical systems) accelerometer with the highest bandwidth and lowest power in its class. The ADXL375 MEMS accelerometer continuously measures the duration and magnitude of impact or shock events within the full-scale range of ±200 g without saturation. The new sensor consumes 140 µA at a full bandwidth of up to 1,600 Hz, delivering more than twice the sampling rate of competing sensors at less than half the power. The ADXL375 is suited for low- and battery-powered wireless sensor networks used in concussion detection, transportation, asset tracking and other applications that are subject to sudden, high-magnitude forces.

- View the ADXL375 product page, download the data sheet or order samples: http://www.analog.com/ADXL375
- Connect with ADI product and applications experts on EngineerZone™, Analog Devices online technical support community: http://ez.analog.com/community/mems

ADXL375 Enables Next-Generation Blast Gauge™ Impact Detection System

The ADXL375 has been designed into the newest generation of the Blast Gauge™, a body-worn blast detection system developed by BlackBox Biometrics. The device is currently deployed with U.S. Armed Forces to measure and record concussive event data that is then used for health and safety assessment. The device also utilizes ADI's ADXL362 low-power, 3-axis MEMS accelerometer as part of an intelligent, continuously operational, motion-activated switch to increase battery life in the sealed environment.

"The ADXL375 provides high-g measurement capabilities with an industry-leading sampling rate, enhancing the ability of the Blast Gauge to accurately detect explosive and concussive events affecting our service members in-theater and in training," said David Borkholder, chief technology officer, BlackBox Biometrics. "In combination with the ultra-low power ADXL362, the ADXL375 has enabled an advanced Blast Gauge system which includes an enhanced ability to distinguish between potentially harmful and innocuous events."

ADXL375 MEMS Accelerometer Features User-Selectable Impact Threshold Levels

The ADXL375 3-axis, 200-g MEMS accelerometer includes an integrated memory management system consisting of a 32-level FIFO (first-in, first-out) memory. The buffer memory includes low-power modes that can be used to set impact thresholds, store data and lower overall system power consumption by offloading those functions from the host processor.

Availability and Pricing

Product	Full Production	Price Each Per 1,000	Packaging
ADXL375	Now	$4.79	3 mm × 5 mm × 1 mm 14-lead LGA

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index.

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Porter Novelli
Andrew MacLellan, 617-897-8270
andrew.maclellan@porternovelli.com
or
Analog Devices, Inc.
Edie Kramer, 781-937-1734
edie.kramer@analog.com

Source: Analog Devices, Inc.