

# High Performance, Dual-Axis Digital Output Accelerometer

Data Sheet ADXL288

### **FEATURES**

±120 g full-scale range

12-bit resolution at 62.5 mg/LSB

512 kHz data interpolation rate

Sensor frequency response down to dc

**On-demand electromechanical self-test** 

Fully differential circuitry for high resistance to EMI/RFI

Independent x- and y-axis sense structures for robust

**FMEA** performance

Independent x- and y-axis arming thresholds

Low noise: 1 LSB rms typical

Qualified for automotive applications Temperature range: -40°C to +105°C

3.3 V and 5 V operation

#### **APPLICATIONS**

Impact sensing Shock detection

#### **GENERAL DESCRIPTION**

The ADXL288 is a dual-axis accelerometer with signal-conditioned outputs available via a 16-bit SPI interface. Identical, independent X and Y sense structures are implemented to create a high performance, high integrity acceleration sensing system.

The X and Y acceleration channels have a nominal full-scale range of  $\pm 120~g$  and a bandwidth of 408 Hz. The acceleration data is provided as a 12-bit, twos complement word with a resolution of 62.5 mg/LSB.

The ADXL288 is available in a 16-lead, narrow-body SOIC package with an exposed pad. The ADXL288 can operate at 3.3 V and 5 V and is specified for operation from  $-40^{\circ}$ C to  $+105^{\circ}$ C.

#### **FUNCTIONAL BLOCK DIAGRAM**

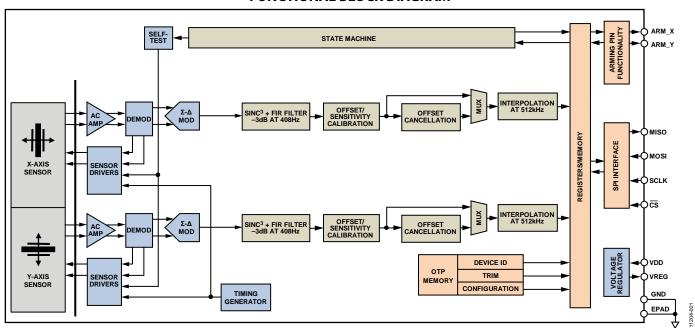


Figure 1.

For more information about the ADXL288, please contact the Analog Devices, Inc., Customer Interaction Center at <a href="http://www.analog.com/en/content/technical\_support\_page/fca.html">http://www.analog.com/en/content/technical\_support\_page/fca.html</a> to connect with a technical support specialist.

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