High Performance, Dual-Axis Digital Output Accelerometer

Data Sheet **ADXL288**

FEATURES

- **±120 *g* full-scale range**
  - **12-bit resolution at 62.5 m*g*/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 ±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°C to +105°C.

FUNCTIONAL BLOCK DIAGRAM

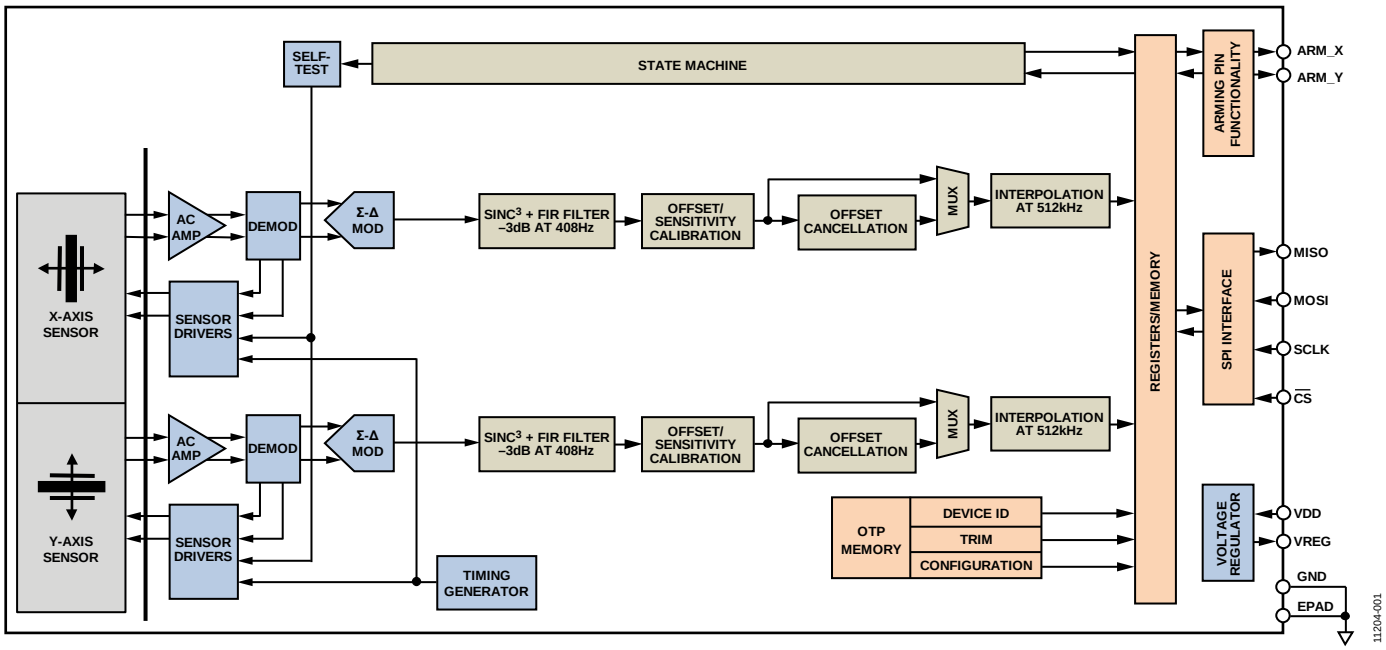

Figure 1.

For more information about the ADXL288, please contact the Analog Devices, Inc., Customer Interaction Center at http://www.analog.com/en/content/technical_support_page/fca.html to connect with a technical support specialist.

Rev. Sp0 **Document Feedback**

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NOTES

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