



**THE DATASHEET OF  
ADXL701WBRWZ-UP-RL**



## FEATURES

- High performance, z-axis digital output accelerometer**
- ±14.2 g full-scale range at 16-bit resolution (0.434 mg/LSB)**
- 2 kHz output sample rate with optional data FIFOs**
- Programmable filter response**
- 20 Hz, 46 Hz, 92 Hz, 184 Hz**
- Continuous electromechanical self test**
- Additional key-on and on demand self test routines**
- Z-axis offset adjust**
- Low quiescent current draw**
- High linearity performance**
- Qualified for automotive applications**
- −40°C to +105°C temperature range**

## APPLICATIONS

- Vehicle rollover detection**
- Platform stabilization/leveling**

## GENERAL DESCRIPTION

The **ADXL701** device is a high precision, single z-axis accelerometer designed for vehicle rollover detection and other high performance applications. The **ADXL701** provides offset stability to better than ±500 mg and sensitivity stability to better than 5% across the entire temperature range. The **ADXL701** is designed with selectable −3 dB filter corner frequencies to satisfy a range of applications, and the 2 kHz output data rate allows sufficient oversampling of the acceleration information.

The acceleration data output from the device is a true 16-bit word and is contained in a 32-bit SPI transaction. The SPI interface contains additional fault detection bits and data formatting bits designed to assist high reliability applications. SPI communications are compatible up to 8 MHz. The 16-bit acceleration data-word offers a resolution of 0.434 mg/LSB for the ±14.2 g full-scale range of the device.

The **ADXL701** is available in an SOIC package with an inverted paddle for improved EMI/RFI robustness. The **ADXL701** operates at nominal power supplies of 3.3 V and 5 V, and is specified to operate across the full automotive temperature range of −40°C to +105°C.

## FUNCTIONAL BLOCK DIAGRAM

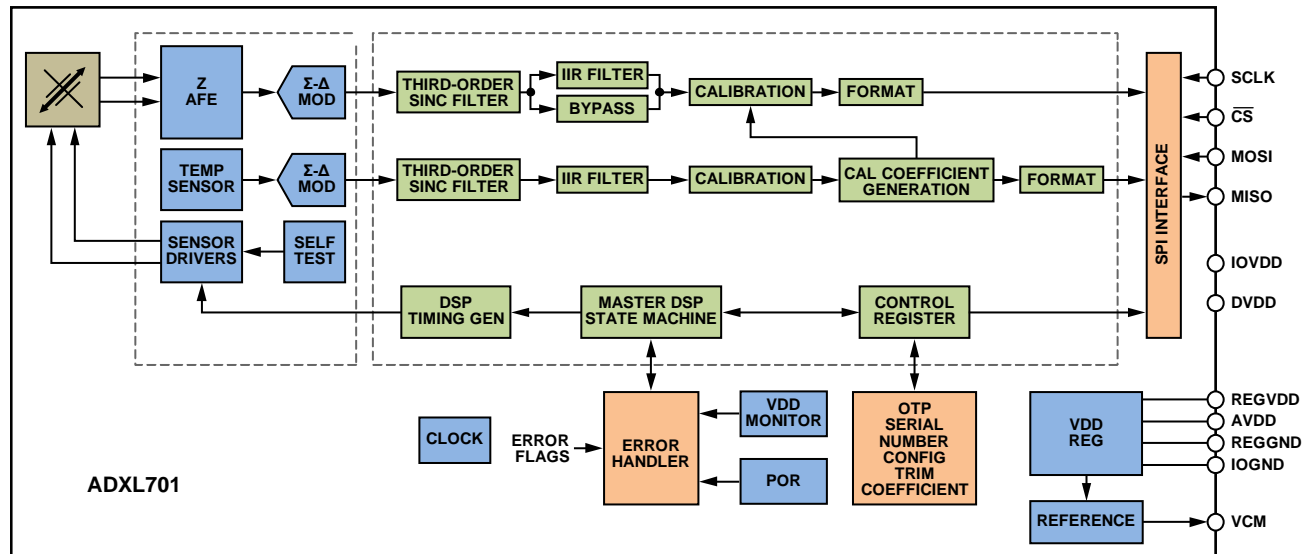


Figure 1.

For more information about the **ADXL701**, please contact the Analog Devices, Inc., *Customer Interaction Center* at [http://www.analog.com/en/content/technical\\_support\\_page/fca.html](http://www.analog.com/en/content/technical_support_page/fca.html) to connect with a technical support specialist.

### Rev. SpA

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

### Document Feedback

**NOTES**

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ADXL701WBRWZ-UP-RL on WIN SOURCE](#)
- ⊖ [Analog Devices Inc. Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management