



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## FEATURES

- Excellent null offset stability over temperature
- High vibration rejection over a wide frequency range
- 2000 g powered shock survivability
- SPI digital output with 16-bit data-word
- Low noise
- Continuous self-test
- Fail-safe functions
- Temperature sensor
- 3.3 V and 5 V operation
- −40°C to +105°C operation
- Small, low-profile industry standard SOIC package provides yaw rate (Z-axis) response
- Innovative ceramic vertical mount package (VMP) provides pitch and roll rate response
- Qualified for automotive applications

## APPLICATIONS

- Electronic stability control
- High performance platform stabilization

## GENERAL DESCRIPTION

The **ADXRS800** is an angular rate sensor (gyroscope) intended for automotive electronic stability control, vehicle rollover detection, and other high performance applications. An advanced, differential, quad-sensor design rejects the influence of linear acceleration, enabling the **ADXRS800** to operate in exceedingly harsh environments where shock and vibration are present.

The **ADXRS800** uses an internal, continuous self-test architecture. The integrity of the electromechanical system is checked by applying a high frequency electrostatic force to the sense structure to generate a rate signal that can be differentiated from the baseband rate data and internally analyzed.

The **ADXRS800** is capable of sensing an angular rate of up to  $\pm 300^\circ/\text{sec}$ . Angular rate data is presented as a 16-bit word, as part of a 32-bit SPI message.

The **ADXRS800** is available in a cavity plastic SOIC-16 and an SMT-compatible vertical mount package and is capable of operating across both a wide voltage range (3.3 V to 5 V) and temperature range (−40°C to +105°C).

## FUNCTIONAL BLOCK DIAGRAM

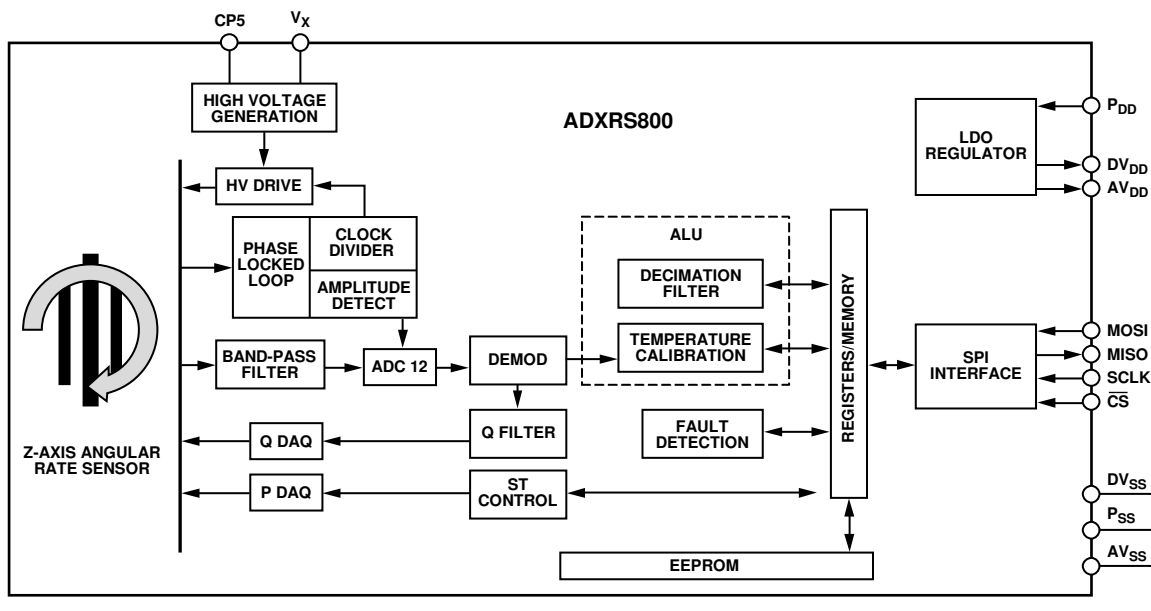


Figure 1.

For more information about the **ADXRS800**, 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. SpC

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# ADXRS800\* PRODUCT PAGE QUICK LINKS

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## COMPARABLE PARTS

View a parametric search of comparable parts.

## EVALUATION KITS

- ADXRS800Z-EY Evaluation Board
- ADXRS800Z-RG Evaluation Board

## DOCUMENTATION

### Data Sheet

- ADXRS800: High Performance, SPI Digital Output, Angular Rate Sensor

### User Guides

- UG-154: ADXRS800 Sensor Evaluation System

## DESIGN RESOURCES

- ADXRS800 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

## DISCUSSIONS

View all ADXRS800 EngineerZone Discussions.

## SAMPLE AND BUY

Visit the product page to see pricing options.

## TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

## DOCUMENT FEEDBACK

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**NOTES**