ADIS16477-2BMLZ

Data Sheet

Precision, Miniature MEMs IMU

Manufacturers	Analog Devices, Inc
Package/Case	44-Ball BGA SMD
Product Type	Motion & Position Sensors
RoHS	
Lifecycle	

Images are for reference only

Please submit RFQ for ADIS16477-2BMLZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADIS16477 is a precision, miniature MEMS inertial measurement unit (IMU) that includes a triaxial gyroscope and a triaxial accelerometer. Each inertial sensor in the ADIS16477 combines with signal conditioning that optimizes dynamic performance. The factory calibration characterizes each sensor for sensitivity, bias, alignment, linear acceleration (gyroscope bias), and point of percussion (accelerometer location). As a result, each sensor has dynamic compensation formulas that provide accurate sensor measurements over a broad set of conditions.

The ADIS16477 provides a simple, cost effective method for integrating accurate, multiaxis inertial sensing into industrial systems, especially when compared with the complexity and investment associated with discrete designs. All necessary motion testing and calibration are part of the production process at the factory, greatly reducing system integration time. Tight orthogonal alignment simplifies inertial frame alignment in navigation systems. The serial peripheral interface (SPI) and register structure provide a simple interface for data collection and configuration control.

The ADIS16477 is available in a 44-ball, ball grid array (BGA) package that is approximately 11 mm × 15 mm × 11 mm.

Applications

Features

Triaxial, digital gyroscope

2°/hr in-run bias stability (ADIS16477-1)

0.15°/√

hr

Triaxial, digital accelerometer, ±40

g

Application

Navigation, stabilization, and instrumentation

Unmanned and autonomous vehicles

Smart agriculture/construction machinery

Factory/industrial automation, robotics

Virtual/augmented reality

Internet of Moving Things

13 µg in-run bias stability

Triaxial, delta angle and delta velocity outputs

Factory calibrated sensitivity, bias, and axial alignment

Calibration temperature range: −40°C to +85°C

2°/hr in-run bias stability (ADIS16477-1)

0.15°/√

hr

13 µg in-run bias stability

Calibration temperature range: −40°C to +85°C

SPI compatible data communications

Programmable operation and control

Automatic and manual bias correction controls

Data ready indicator for synchronous data acquisition

External sync modes: direct, pulse, scaled, and output

On demand self test of inertial sensors

On demand self test of flash memory

Single-supply operation (VDD): 3.0 V to 3.6 V

2000

g

Operating temperature range: −40°C to +105°C

Automatic and manual bias correction controls

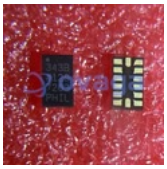
Data ready indicator for synchronous data acquisition

External sync modes: direct, pulse, scaled, and output

On demand self test of inertial sensors

On demand self test of flash memory

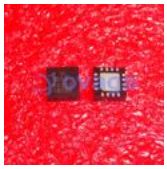
Related Products



ADXL343BCCZ

Analog Devices, Inc

LGA-14



ADXL335BCPZ-RL7

Analog Devices, Inc

LFCSP16

ADXL103CE

Analog Devices, Inc

CLCC-8

ADIS16488BMLZ

Analog Devices, Inc

MSM24

ADXRS642BBGZ

Analog Devices, Inc

CBGA-32

ADXL357BEZ

Analog Devices, Inc

LCC-14

ADXL346ACCZ-RL7

Analog Devices, Inc

LGA16

ADXL345BCCZ-RL7

Analog Devices, Inc

LGA-14