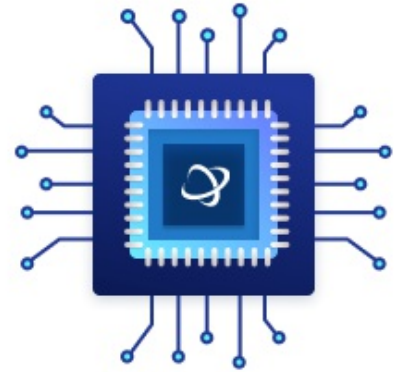


Inertial Measurement Unit Digital Output 3.3V 14-Pin MSM LAMINATE Tray

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	
Product Type	Motion & Position Sensors
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADIS16465-1BMLZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ADIS16465 is a precision, microelectric mechanical system (MEMS), inertial measurement unit (IMU) that includes a triaxial gyroscope and a triaxial accelerometer. Each inertial sensor in the ADIS16465 combines with signal conditioning to optimize dynamic performance. The factory calibration characterizes each sensor for sensitivity, bias, alignment, linear acceleration (gyroscope bias), and point of percussion (accelerometer location). Therefore, each sensor has dynamic compensation formulas that provide accurate sensor measurements over a broad set of conditions.

The ADIS16465 provides a simple, cost effective method for integrating accurate, multi-axis inertial sensing into industrial systems, especially when compared to 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 ADIS16465 is in an aluminum module package that is approximately 22.4 mm × 22.4 mm × 9 mm with a 14-lead connector interface.

## Applications

### Features

Triaxial, digital gyroscope

2°/hr in-run bias stability (ADIS16465-1)

0.15°/√hr angular random walk (ADIS16465-1 and ADIS16465-2)

Triaxial, digital accelerometer, ±8 g

3.6 μg in-run bias stability

Triaxial, delta angle, and delta velocity outputs

### Application

Navigation, stabilization, and instrumentation

Unmanned and autonomous vehicles

Smart agriculture and construction machinery

Factory/industrial automation, robotics

Virtual/augmented reality

Internet of Moving Things

Factory calibrated sensitivity, bias, and axial alignment

Calibration temperature range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

$2^{\circ}/\text{hr}$  in-run bias stability (ADIS16465-1)

$0.15^{\circ}/\sqrt{\text{hr}}$  angular random walk (ADIS16465-1 and ADIS16465-2)

$3.6\ \mu\text{g}$  in-run bias stability

Calibration temperature range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

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 mechanical shock survivability

Operating temperature range:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

Automatic and manual bias correction controls

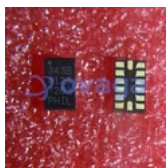
Data ready indicator for synchronous data acquisition

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

On demand self test of inertial sensors

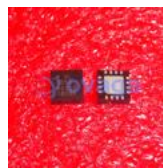
On demand self test of flash memory

## 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