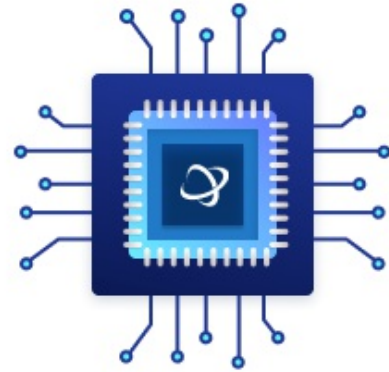


## SIX DEGREES OF FREEDOM TACTICAL

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



Images are for reference only

Please submit RFQ for ADIS16490BMLZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ADIS16490 is a complete inertial system that includes a triaxis gyroscope and a triaxis accelerometer. Each inertial sensor in the ADIS16490 combines industry leading iMEMS® technology with signal conditioning that optimizes dynamic performance. The factory calibration characterizes each sensor for sensitivity, bias, alignment, and linear acceleration (gyroscope bias). As a result, each sensor has its own dynamic compensation formulas that provide accurate sensor measurements.

The ADIS16490 provides a simple, cost effective method for integrating accurate, multi-axis 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 SPI and register structure provide a simple interface for data collection and configuration control.

The ADIS16490 uses the same footprint and connector system as the ADIS16375, ADIS16480, ADIS16485, and ADIS16488A, which greatly simplifies the upgrade process. The ADIS16490 is packaged in a module that is approximately 47 mm × 44 mm × 14 mm and includes a standard connector interface.

## Features

Triaxial, digital gyroscope,  $\pm 100^\circ/\text{sec}$  dynamic range

1.8 $^\circ/\text{hr}$  in run bias stability

0.09 $^\circ/\sqrt{\text{hr}}$  angular random walk

Triaxial, digital accelerometer,  $\pm 8\text{ g}$

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

Triaxial, delta angle and delta velocity outputs

Factory calibrated sensitivity, bias, and axial alignment

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

Serial peripheral interface (SPI) compatible

Programmable operation and control

Automatic and manual bias correction controls

4 finite impulse response (FIR) filter banks, 120 configurable taps

Digital input/output (I/O): data ready, external clock

Sample clock options: internal, external, or scaled

On demand self test of inertial sensors

Single-supply operation: 3.0 V to 3.6 V

2000 g shock survivability

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

## Application

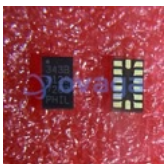
Precision instrumentation, stabilization

Guidance, navigation, control

Avionics, unmanned vehicles

Precision autonomous machines, robotics

## Related Products



[ADXL343BCCZ](#)

Analog Devices, Inc  
LGA-14



[ADXL335BCPZ-RL7](#)

Analog Devices, Inc  
LFCSP16



[ADXL103CE](#)

Analog Devices, Inc  
CLCC-8



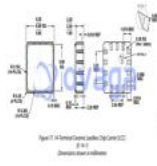
[ADIS16488BMLZ](#)

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