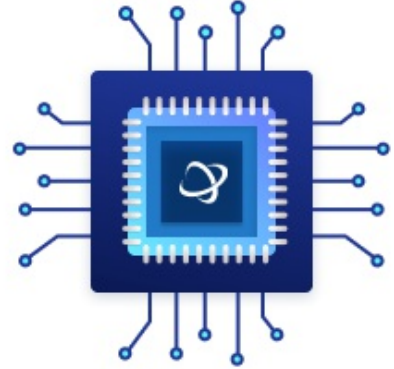


IMUs - Inertial Measurement Units Sensor, Inertial Minus 55C - 105C

Manufacturers	Analog Devices, Inc
Package/Case	
Product Type	Motion & Position Sensors
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for ADIS16488CMLZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADIS16488A iSensor® device is a complete inertial system that includes a triaxis gyroscope, a triaxis accelerometer, triaxis magnetometer, and pressure sensor. Each inertial sensor in the ADIS16488A 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 ADIS16488A 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 ADIS16488A uses the same footprint and connector system as the ADIS16375, ADIS16480, and ADIS16485, which greatly simplifies the upgrade process. The ADIS16488A is packaged in a module that is approximately 47 mm × 44 mm × 14 mm and includes a standard connector interface.

Features

Triaxial, digital gyroscope, $\pm 450^\circ/\text{sec}$ dynamic range

5.1 $^\circ/\text{hr}$ in-run bias stability

0.26 $^\circ/\sqrt{\text{hr}}$ angular random walk

0.01% nonlinearity

Triaxial, digital accelerometer, ± 18 g

Triaxial, delta angle and delta velocity outputs

Triaxial, digital magnetometer, ± 2.5 gauss

Digital pressure sensor, 300 mbar to 1100 mbar

Fast start-up time, ~ 500 ms

Factory-calibrated sensitivity, bias, and axial alignment

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

SPI-compatible serial interface

Embedded temperature sensor

Programmable operation and control

Automatic and manual bias correction controls

4 FIR filter banks, 120 configurable taps

Digital input/output: data-ready alarm indicator, external clock

Alarms for condition monitoring

Power-down/sleep mode for power management

Optional external sample clock input: up to 2.4 kHz

Single command self test

Single-supply operation: 3.0 V to 3.6 V

2000 g shock survivability

Operating temperature range: -55°C to $+105^\circ\text{C}$ (CML)

Application

Platform stabilization and control

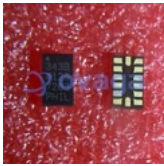
Navigation

Personnel tracking

Instrumentation

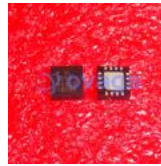
Robotics

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