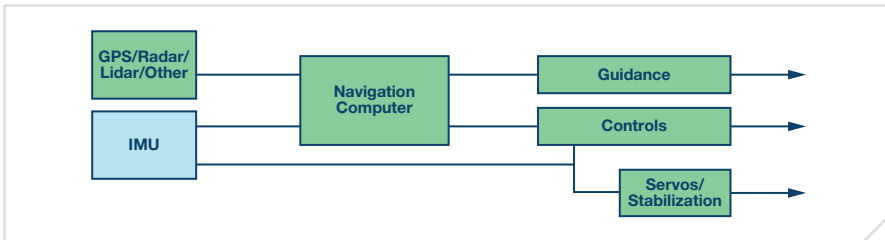


# PRECISION MINI IMUs



## Overview

The [ADIS16470/ADIS16475/ADIS16477](#) and [ADIS16460/ADIS16465/ADIS16467](#) industrial inertial measurement units offer a no compromise solution to system developers previously inhibited by the performance limitations of commercial grade sensors. Analog Devices' advancements in MEMS inertial sensing enables exceptional stability at breakthrough price levels. Whether for precision instrument stabilization or guidance and control, these new sensors deliver wide dynamic range, ultralow noise angular, and linear acceleration sensing with stable operation, even under severe environmental disturbances.

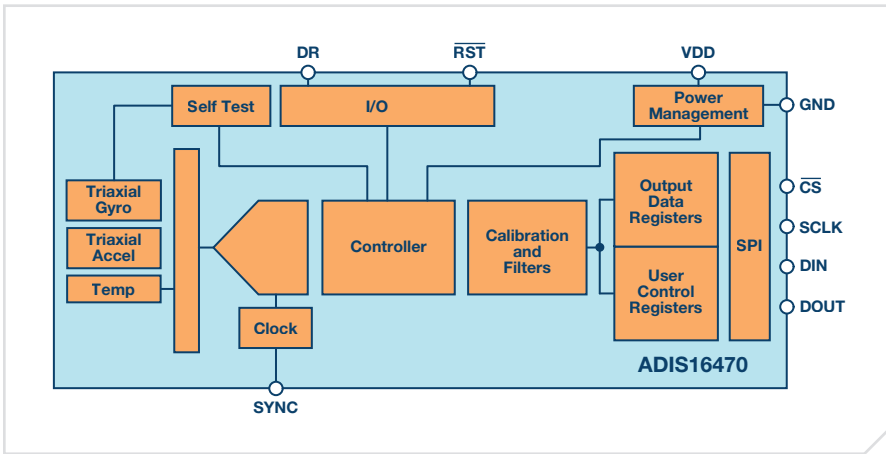


## Applications

- ▶ Unmanned vehicles, autonomous machines, robotics
- ▶ Precision stabilization, instrumentation
- ▶ Internet of Moving Things



ADI's newest industrial grade IMUs make highly stable and ruggedized sensing attainable for multiple navigation and stabilization applications that demand no compromise in high performance, affordability, and reliable operation under complex and dynamic environments.



### Dynamic Range Options

- ▶ **ADIS16460:** 100°/sec, 5 g, -25°C to +85°C
- ▶ **ADIS16470:** 2000°/sec, 40g, -25°C to +85°C
- ▶ **ADIS16465/ADIS16475:** up to 2000°/sec, 8 g, -40°C to +105°C
- ▶ **ADIS16467/ADIS16477:** up to 2000°/sec, 40 g, -40°C to +105°C

## ADI MEMS Sensors

ADI has perfected and patented unique MEMS processes and architectures that deliver industry-leading, ultralow noise and stable sensing even in the presence of vibration, shock, and temperature disturbances. With three decades of high reliability experience in the automotive, industrial, and military markets, ADI gyroscope and accelerometer cores have been optimized to deliver the highest application level performance through a balanced specification approach and the intelligent fusing of precision sensor cores and industry-leading signal processing.

### iSensor

Demanding industrial applications benefit from iSensor® integration of triaxial rotational and acceleration sensing, coupled with embedded compensation, filtering, and processing. Each production unit is uniquely calibrated across temperature extremes and alignment compensated. Analog Devices' industry-leading signal conditioning, conversion, and processing have been optimized and embedded, allowing systems designers to then concentrate on application level processing.

## Performance

The ADIS1646x/ADIS1647x provide the industry's best overall stability while operating in complex dynamic environments. The lowest noise, full dynamic range, and wide bandwidth coupled with highly accurate temperature calibration, sensor alignment, and industry-leading vibration rejection, combine to produce stable sensor outputs under extreme conditions. Both connector-mount and surface-mount package options provide system-level efficiencies, while simplifying integration.

ADIS1646x/ ADIS1647x	Unit	
Gyroscope Range	°/sec	125 to 2000
Gyroscope Noise	°/sec/√Hz rms	0.0036
Gyroscope In-Run Bias	°/hr	2
Linear g	°/sec/g	0.015
Cross Axis	%	0.09
Bias Tempco	°/sec/°C	0.002
Gyroscope Bandwidth	Hz	550
Accelerometer Range	g	8 to 40
Accelerometer Noise	mg/√Hz rms	0.02
Accelerometer In-Run Bias	mg	0.005
Accelerometer Bandwidth	Hz	600

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