



## SIIMU02° MEMS INERTIAL MEASUREMENT UNIT (IMU)

# COMPACT, LIGHTWEIGHT, GUN-HARD

### An all-digital, second generation, MEMS IMU

The Collins SiIMU02° micro electro-mechanical systems (MEMS) inertial measurement unit (IMU) delivers excellent angular and linear inertial measurement performance in a compact and lightweight package, and is gun-hard to 20,000g.

SiIMU02 is capable of meeting the most challenging guidance, navigation and platform stabilization applications.

SiIMU02 is firmware configurable for ranges and applications with various interface options available.

Collins Aerospace has a long and respected heritage in the design and development of inertial sensors and today specializes in MEMS products.

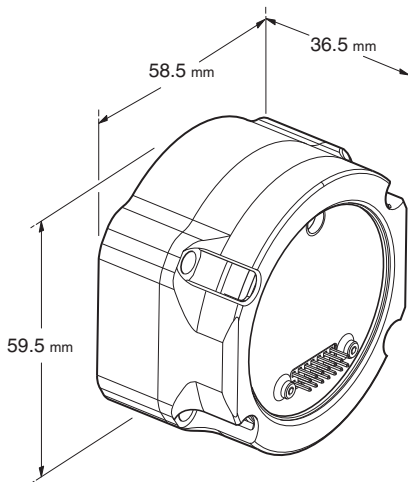


### PEDIGREE

- First MEMS IMU in military service
- Selected by over 60 customers worldwide – over 130,000 MEMS products delivered
- Used in missile and weapons navigation, platform stabilization and navigation
- Rigorous performance and simulated aging ensures conformance to specification throughout product life



SiIMU02



## PERFORMANCE

### Medium performance

- Gun-hard options available (20,000g)

## PRODUCT BENEFITS

- Full 6-DoF and three-axis rate pack options
- 20,000g gun launch capability
- Rate and angle modes of operation
- Lower power and rapid start up
- Modular architecture
- ITAR free

## KEY CHARACTERISTICS

Volume	65.5 cm <sup>3</sup> in typical housing
Mass	<200 grams in typical housing
Power consumption	≤3.75W
Operating temperature range	-45° C to 75° C
Start-up time	345ms
Built-in-test	Command, start up, continuous
Gyro operating range	±9000°/s
Accelerometer operating range	±30g to ±140g
Supply voltage	+5 VDC
Electrical interface	SDLC, AMRAAM (configurable)

## TYPICAL PERFORMANCE

	GYRO	ACCELEROMETERS (±30G)
Bias repeatability (1σ) *	20°/hr	0.7mg
Bias instability (max)	1°/hr	0.2mg
Random walk (max)	0.25°/√hr	0.17m/s/√hr
Scale factor error (1σ) *	600 ppm	250 ppm (±1g)
Bandwidth (-90°) (configurable up to)	135 Hz	130 Hz

\*All axes, all temperatures, factory fresh.

## ALTERNATIVE PRODUCTS

LITIS<sup>®</sup>

## PERFORMANCE

### FOG performance

- Best-in-class MEMS IMU
- Highly modular, tailored solution
- Non-licensable



IMU25

## PERFORMANCE

### High performance

- High performance gyro
- Open loop accelerometer performance

Specifications subject to change without notice.

This document does not contain any export controlled data.



## Collins Aerospace

+44(0)1752 69 56 95  
fax: +44(0)1752 69 55 00

gnc.uk@collins.com  
collinsaerospace.com