

GCIMU02

TACTICAL GRADE INERTIAL
MEASUREMENT UNIT

ITAR
FREE

GCIMU02 SPECIFICATIONS	
Size	44 mm x 47 mm x 29.3 mm, without isolator 54.6 mm x 61.2 mm x 46.2 mm with isolator
Weight	< 75 g ,without isolator & <250 g, with isolator
Power Consumption	< 1.5 W
Operating Temperature Range	[-40 , +70] (°C)
Data Rate	up to 12kHz angular rate and linear acceleration 500 Hz compensated ΔVs and Δθs (other frequencies available)
Gyro Operating Range	Varies by configuration up to 10.800 deg/sec
Accelerometer Operating Range	Varies by configuration up to 100 g
Supply Voltage	4-36 V
Timing Stability	< 2.5 ppm
Communication Interfaces	RS-422 UART, SDLC

GCIMU02 is a family of high-precision tactical grade Inertial Measurement Units (IMUs) that utilize advanced MEMS-based sensor technology. Designed for demanding guidance, control, and navigation applications, GCIMU02 offers a cost-effective and compact alternative to traditional fiber-optic and ring laser gyroscope-based IMUs—delivering comparable accuracy with significantly reduced size, weight, power consumption, and cost. GCIMU02 is ideal for integration into a wide range of systems, including aerial, land, naval, and underwater platforms, where precise motion sensing and stabilization are critical.

	Magnetometer	Barometer
Standard Range	± 20 G	30-125 kPa
Total RMS Noise	< 0.002 G	< 0.08 Pa
Resolution	< 0.001 G	< 0.015 Pa

GCIMU02 TYPICAL PERFORMANCE PARAMETERS								
			Gyroscope			Accelerometer		
			Bias repeatability, run-to-run (°/h)	Bias in-run stability (°/h)	ARW (°/√Hz)	Bias repeatability, long-term (mg)	Bias in-run stability (μg)	VRW (μg/√Hz)
Across available configurations			10 to 0.5	5 to 0.05	0.25 to 0.01	12 to 0.25	150 to 3	100 to 10
Example Configuration	Gyroscope range	±500 °/s	0.5	0.05	0.05	1	10	10
	Accelerometer range	±40 g						

Configuration Ranges		
Available configuration range	Gyroscope full-scale range	Accelerometer full-scale range
	±100 to ±10800 °/s	±2 to ±200 g