



LandMark™ 005 INS/GPS

Single Antenna INS/GPS with High Speed IMU



The LandMark™ 005, MEMS INS/GPS offers the **latest advancements in inertial technology**. It features low noise MEMS sensors and VELOX™ processing technology enabling precision position information during short term GPS outages. The LandMark™005 INS/GPS is well suited for flight control, navigation, image and antenna stabilization.



$\pm 0.03^\circ$
Pitch and Roll

$\pm 0.001^\circ$
Heading

3 NMPH
Free Inertial

Active Continuous Wave Detection
Anti-Jamming

GPS L1C/A: GPS, SBAS, QZSS, BEIDOU
B1, GALILEO E1B/C
Receiver Type

Low Noise. High Speed.
Inertial Systems and Sensors



LandMark™ 005 INS/GPS

INS System Performance

Channels	72 Channels
Receiver Type	GPS L1C/A: GPS SBAS QZSS GLONASS BEIDOU B1 GALILEO E1B/C
SBAS—WASS EGNOS MSAS	< 2 m CEP
Heading	±0.001°
Update Rate (GPS)	10 Hz
Horizontal Position Acc.	Autonomous 2.5 m
Velocity Accuracy	0.05 m/s
Attitude Accuracy - Pitch/Roll	±0.03°
Startup Time (Inertial)	< 0.65 sec typical (29 sec, cold start)
Update Rate	100Hz
Free Inertial (60 sec duration)	3 NMPH

Inertial Performance

GYRO Axes

ACCEL Axes

Range	± 490 °/s	± 15 g
ARW / VRW	0.0028° /sec/√Hz	0.071 mg/√Hz
Bias In-Run w/ EKF	5°/hour	0.05 mg
Bias Over Temp w/ EKF	<0.1 °/s	<1.0 mg
G-Sensitivity	0.1 °/s/g ²	
Scale Factor Error	100 PPM (EKF) 500 PPM (Free Inertial)	

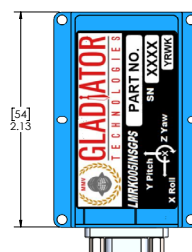
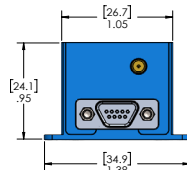
Environment

Shock	500 g 1/2 sine 1 ms
Vibration Operational	4g
Calibrated Temp	Operating: -40°C to +85°C Storage: -40°C to +100°C

SWAP-C Design

Input Voltage	+3.8 V to + 5.5 V Max (single sided)
Power Consumption	700 mW Typical / 900 mW Maximum
Mass	60 grams ±0.5 g
Size	Metric: 2.8 x 2.4 x 5.4 = 34.8 cm ³ US: 1.05 x 0.95 x 2.13 = 2.12 im ³

All performance parameters 1σ
Specification subject to change without notice
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NON ITAR
ECCN 7A994



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