



LandMark™005 INS/GPS

Inertial Navigation System



The LandMark™005 INS/GPS features low noise MEMS sensors and Extended Kalman Filter with 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.



Low Noise: $0.0028^{\circ}/s/\sqrt{Hz}$



Free Inertial Performance: 3 NMPH



VELOX™ High Speed Processing



Factory Calibrated: $-50^{\circ}C$ to $85^{\circ}C$



No ITAR Restrictions

Low Noise. High Performance.

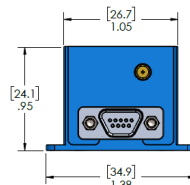
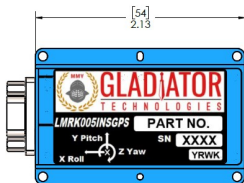


GLADIATOR

TECHNOLOGIES

LandMark™005 INS/GPS

Performance		
Parameter	Gyro	Accel
Range	±490°/s	±15 g
ARW / VRW	0.0028°/s/√Hz	0.071 mg/√Hz
Bias Over Temp.	< 0.1°/s	< 1 mg
Resolution	0.0012°/s	0.0064 mg
Pitch and Roll Angles	5°/h	0.05 mg
G Sensitivity	0.001°/s/g	1 mg/g ²
Scale Factor Error	≤ 0.1% (over temperature)	
Alignment	0.5 mrad	
Environment		
Shock	500 g ½ sine 1 ms powered on	
Vibration	4 grms (max)	
Temperature	Operating: -50°C to +85°C	Storage: -50°C to +100°C
INS/GPS Performance		
Free Inertial Typical	3 NMPH (< 60 sec duration)	
Heading Accuracy	±0.5°	
GNSS Receiver	GPS L1C/A: GPS SBAS QZSS BEIDOU B1 GALILEO E1B/C	
SBAS—WASS EGNOS MSAS	< 2.0 m CEP	
GPS Update Rate (GPS)	Up to 10 Hz	
Velocity Accuracy	0.05 m/s	
GPS Horizontal Position Accuracy	Autonomous 2.5 m	
Startup Time (Inertial)	< 0.65 sec typical (alignment < 2 minutes)	
Update Rate (INS)	100 Hz	
Software	Development Kit Available	
Electrical		
Input Voltage	+3.8 V to +5.5 V Max. Input (single sided)	
Power Consumption	700 mW Typical / 900 mW Maximum	
Mechanical		
Size and Mass	Metric: 2.67 x 2.41 x 5.41 = 34.8 cm ³ US: 1.05 x 0.95 x 2.13 = 2.12 in ³ 60 ± 2 grams	



www.gladiatortechnologies.com/landmark005ins

All performance parameters 1σ
Specification subject to change without notice



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