



LandMark™65 IMU

High Dynamic MEMS IMU



The LandMark™65 IMU is Gladiator Technologies' High Dynamic, High Performance six-axis MEMS IMU. Equipped with low noise sensors, VELOX™ processing and user configurable firmware., this IMU is designed to perform in high dynamic environments up to 2000°/second, 40 g, high shock and high vibration.



Low Noise: 0.002°/s/√Hz



Excellent Bias Stability: 7°/h



VELOX™ High Speed Processing



Factory Calibrated: -40°C to 85°C



NON-ITAR

Low Noise. High Performance.

LandMark™ 65 IMU

Performance

Parameter	Gyro	Accel
Range	$\pm 2000^\circ/\text{s}$	$\pm 40 \text{ g}$
ARW / VRW	$0.002^\circ/\text{s}/\sqrt{\text{Hz}}$	$0.035 \text{ mg}/\sqrt{\text{Hz}}$
Bias In-Run	$7^\circ/\text{h}$	0.01 mg
Bias Over Temp.	$< 0.03^\circ/\text{s}$	1 mg
Resolution	$0.005^\circ/\text{s}$	0.0064 mg
G Sensitivity	$0.003^\circ/\text{s}/\text{g}$	$0.4 \text{ mg}/\text{g}^2$
Scale Factor Error	$\leq 0.1\%$ (over temperature)	
Alignment	$< 0.5 \text{ mrad}$	

Environment

Shock	1000 g $\frac{1}{2}$ sine 1 ms powered on
Vibration	15 g _{RMS} (20 Hz to 3 kHz)
Operating Temp	-50°C to +85°C
Non-Operating Temp	-55°C to +85°C

Interface — with VELOX™ Processing

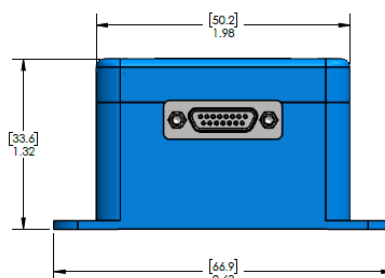
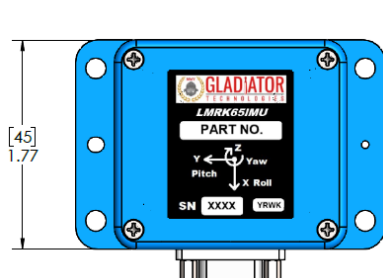
Update Rate	Up to 2.5 kHz (User Selectable)
External Sync	Up to 4 kHz (User Selectable)
Start Up Time	$< 0.25 \text{ s}$
Data Format	16/24/32 - Bit
Data Interface	RS-422/RS-485 3 Mbaud & CAN 2.0B at 1 MHz
Bandwidth	250 Hz
Software	Development Kit Available

Electrical

Input Voltage	+7 V to +36 V Max. Input (single sided)
Power Consumption	500 mW Typical / 600 mW Maximum

Mechanical

Mass	$\leq 115 \text{ grams}$
Size	Metric: $5.0 \times 4.5 \times 3.4 = 76.5 \text{ cm}^3$ US: $1.98 \times 1.77 \times 1.33 = 4.66 \text{ in}^3$



www.gladiatortechologies.com/landmark65

All performance parameters 1 σ
Specification subject to change without notice
Rev. 03.14.19



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