LOW NOISE. HIGH SPEED.

Inertial Sensors and Systems

MEMS Inertial Systems and Sensors Proven in Challenging Defense Applications

Gladiator Technologies is pushing performance boundaries by combining low noise sensors with high speed data processing. Our products meet the highest inertial sensor demands in a SWaP-C package and are proven on multiple Defense and Commercial applications worldwide.

Inertial Navigation Systems
Inertial Measurement Units
Gyroscopes
Accelerometers

Robust Low Noise Sensors with VELOX™ High Speed Processing

INNOVATING INERTIAL PERFORMANCE
PERFORMANCE REDEFINED

**LOW NOISE**

Gladiator designs every inertial product with low noise MEMS sensors. Sensors with low ARW and VRW are critical to precision measurement and Gladiator products deliver exceptional noise performance in a SWaP-C package.

- **ARW:** 0.07°/√hr
- **VRW:** 0.05 mg/√Hz

**HIGH SPEED VELOX™**

Speed matters. With VELOX™ high speed digital processing our products are built to output data at lightning fast data rates and reduced phase lag without compromising inertial performance.

- **10 kHz Output**
- **7.5 Mbaud**
- **600 Hz Bandwidth (-3db)**
- **Configure Filter Order**

**RELIABLE & REPEATABLE**

Every mission is different and performance through environments is a requirement. Gladiator Technologies calibrates and models products in the factory to assure repeatable and predictable performance over environments including:

- **Temperature range -50°C to 85°C.**
- **Shock survivability of 1000g**
- **Operational Vibration up to 24gRMS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Rate Range</th>
<th>Accel Range</th>
<th>ARW/VRW</th>
<th>Bias In Run</th>
<th>Bias over Temp</th>
<th>Bandwidth</th>
<th>Message Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triax Accelerometer</td>
<td>-</td>
<td>40g</td>
<td>0.058 mg/s/√Hz</td>
<td>0.015 mg</td>
<td>0.5 mg</td>
<td>800 Hz</td>
<td>&lt;44µs</td>
</tr>
<tr>
<td>Triax Gyroscope</td>
<td>490°/s</td>
<td>-</td>
<td>0.017°/s/√Hz</td>
<td>3.5°/h</td>
<td>0.075°/s</td>
<td>600 Hz</td>
<td>&lt;20µs</td>
</tr>
<tr>
<td>IMUs</td>
<td>LandMark™005</td>
<td>490°/s</td>
<td>15g</td>
<td>0.07°/√hr 0.04 mg/√Hz</td>
<td>3.5°/h 0.020 mg</td>
<td>0.075°/s +/- 0.4mg</td>
<td>600 Hz</td>
</tr>
<tr>
<td>LandMark™007</td>
<td>2000°/s</td>
<td>98g</td>
<td>0.07°/√hr 0.05 mg/√Hz</td>
<td>3.5°/h 5 mg</td>
<td>0.075°/s +/- 60mg</td>
<td>600 Hz</td>
<td>&lt;114µs</td>
</tr>
<tr>
<td>LandMark™007X</td>
<td>2000°/s</td>
<td>200g</td>
<td>0.07°/√hr 0.05 mg/√Hz</td>
<td>3.5°/h 5 mg</td>
<td>0.075°/s +/- 60mg</td>
<td>600 Hz</td>
<td>&lt;114µs</td>
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</table>

**Inertial Navigation Systems with Integrated GPS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Heading (GPS)</th>
<th>Pitch/Roll Angles</th>
<th>Free Inertial *GPS Denied</th>
<th>Velocity Accuracy</th>
<th>Size</th>
<th>Mass</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>LandMark™005 INS/GPS</td>
<td>±0.001°</td>
<td>±0.03°</td>
<td>&lt;3 NMPH</td>
<td>0.05 m/s</td>
<td>2.12 in³/d.cm</td>
<td>60g</td>
<td>700 mW</td>
</tr>
</tbody>
</table>

NO ITAR RESTRICTIONS

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