LITIS®

COMPACT, LIGHTWEIGHT, HIGH PERFORMANCE MEMS IMU

The latest tactical grade, modular MEMS IMU

LITIS® has the same form factor as SiIMU02® to allow simple system upgrades and provide enhanced capability with less reliance on GNSS aiding. The modular architecture of the LITIS design readily enables the incorporation of specific customer requirements.

Through extensive modeling and hardware testing, Collins Aerospace ensures performance over the lifetime of the product.

As a respected military supplier, we appreciate the need for long-term product availability backed by full customer support.

Collins Aerospace has a long and respected heritage in the design and development of inertial sensors and today specializes in Micro Electro-Mechanical Systems (MEMS) products.

KEY FEATURES & BENEFITS

- Selected by more than 100 customers worldwide – over 250,000 MEMS products delivered
- Used in missile/weapon navigation and platform stabilization
- Rigorous performance and simulated aging ensures conformance to specification throughout life
**LITIS® MEMS INERTIAL MEASUREMENT UNIT (IMU)**

**KEY CHARACTERISTICS**
- **Volume**: 65.5 cm³ in typical housing
- **Mass**: <200 grams in typical housing
- **Power consumption**: ≤2.5W
- **Operating temperature**: -55°C to +85°C
- **Start-up time**: 300ms
- **Gyro operating range**: ±9000°/s
- **Accelerometer operating range**: ±30g to ±140g
- **Supply voltage**: +5V DC
- **Electrical interface**: PC, SDLC, HDLC, AMRAAM (configurable)

**PERFORMANCE**
- **FOG Performance**
  - High performance gyro
  - Open loop accelerometer performance

**PRODUCT BENEFITS**
- Full 6-DoF and 3 axis rate pack options
- Compact form factor – same as SiIMU02®
- Low power and rapid start-up
  - Rate and angle modes of operation
  - Modular architecture
  - ITAR free

**TYPICAL PERFORMANCE**

<table>
<thead>
<tr>
<th>Gyro</th>
<th>Accelerometers (±30g)</th>
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</thead>
<tbody>
<tr>
<td>Bias repeatability (1σ)*</td>
<td>7°/hr</td>
</tr>
<tr>
<td>Bias instability (max)</td>
<td>0.5°/hr</td>
</tr>
<tr>
<td>Random walk (max)</td>
<td>0.05°/√hr</td>
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<tr>
<td>Scale factor error (1σ)*</td>
<td>330 ppm (±500°/s)</td>
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<tr>
<td>Bandwidth (-90°) (configurable up to)</td>
<td>135Hz</td>
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</tbody>
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**Alternate Products**

- **SiIMU02®**
  - Medium Performance
  - Gun Hard options available (20,000g)

- **IMU25™**
  - High Performance
  - Best-in-class MEMS IMU
  - Highly modular, tailored solution
  - Non-licensable

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