

MinIM[®]

MEMS Inertial Measurement Unit (IMU)

With over 130,000 MEMS units in service, UTC Aerospace Systems has now developed its next-generation IMU, meeting customer demand for cost effective and smaller, ultra-reliable IMU devices.

The new MinIM[®] is a ruggedised IMU that incorporates the latest capacitive technology and is less than 1/4 the size and weight of established production MEMS IMUs - at under 1 cubic inch in volume.

Its small form factor and low cost make MinIM[®] ideal for applications such as guided weapons, flight control systems, anti-tank weapons, small UAVs and troop navigation units.

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

- First MEMS IMU in military service
- Selected by over 60 customers worldwide - over 130,000 MEMS products delivered
- Used in missile and weapons' navigation, platform stabilisation and navigation
- Rigorous performance and simulated ageing ensures conformance to specification throughout life

AIS Atlantic
Inertial Systems

UTC Aerospace Systems

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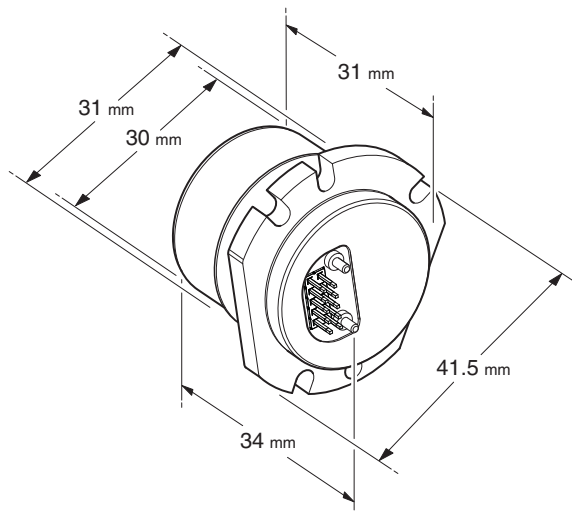
Product Benefits

- Full 6 DoF inertial measurement unit
- Latest capacitive technology
- Excellent performance in cubic inch form
- Gun-hard option, survivable to 16,000g
- Modular architecture to meet customer performance and price expectations
- Low noise

Key Characteristics

Volume	1 in ³ without mount
Mass	≤70 gram in typical housing
Power consumption	1.5W
Operating temperature	-40°C to +65°C extended -55°C to +85°C
Start-up time data range	500ms
Built-in-test	Continuous
Gyro operating range	±1000°/s axis 1, ±500°/s axis 2
Accelerometer operating range	±30g
Supply voltage	+5V DC
Electrical interface	PC

Typical Performance	Gyro	Accelerometers
Bias repeatability	240°/hr	50 mg
Bias instability	12°/hr	1.5 mg
Random walk	1°/√hr	0.6m/s/√hr
Scale factor repeatability for ±1000°/s and ±35g ranges (1σ)	1,000 ppm	1,800 ppm
Bandwidth	Configurable	Configurable



Performance

Tactical

- High performance gyro
- Closed loop high performance accelerometer



TITAN®

High Performance

- High performance gyro
- Open loop accelerometer performance



LITIS®

Medium Performance

- Gun Hard options available (20,000g)



SiIMU02®

Low Cost IMU

- Small form factor



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