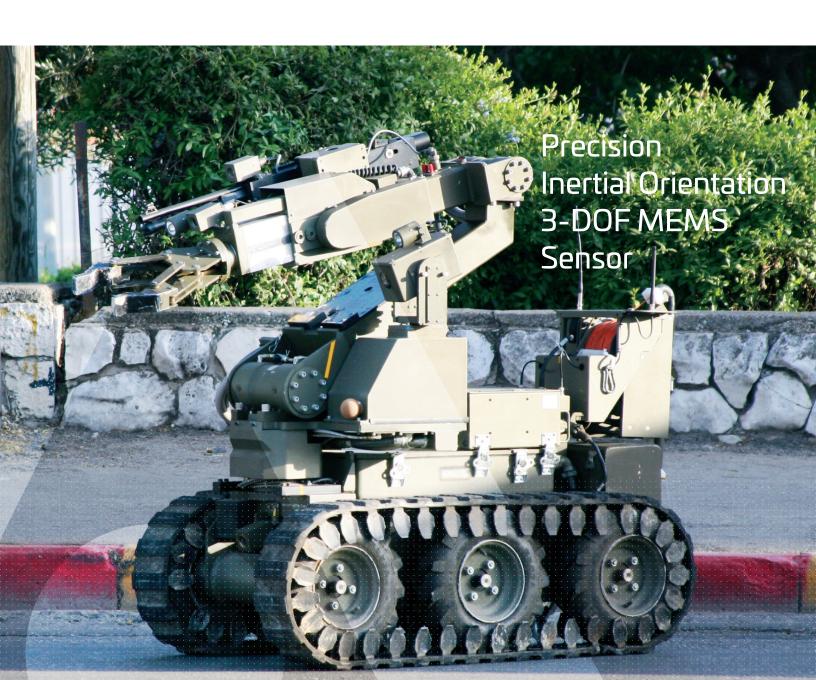


InterSense® InertiaCube®4 Motion Tracker



InterSense® InertiaCube®4

The 4th generation InertiaCube[®]4 is the industry's leading 3-Degrees of Freedom (DOF) MEMS-based inertial technology, utilizing advanced Kalman filtering algorithms to produce a full 360° sourceless orientation tracking sensor. The sensor's portable package with high-end performance and accuracy is ideal for a range of applications, including simulation & training, virtual & augmented reality, motion capture, robotics and human movement analysis.



Technical Specifications

Key Features

- Sourceless 3DOF Tracking with Full 360° Range
- ➤ Accuracy of 1° Yaw, 0.25° Pitch & Roll
- ➤ 200 Hz Update Rate 1000 Hz available for USB
- ➤ 2000° Maximum Angular Rate
- Adjustable Output Filters and Rotational Sensitivity
- ➤ In-situ and Environmental Compass Calibration Tools for Static Magnetic Field Compensation
- ➤ USB and RS-232 Versions Available
- ➤ AHRS Output

General Specifications:

Degrees of Freedom: 3 (yaw, pitch and roll)

Angular Range: Full 360° — all axes

Maximum Angular Rate: 2000° per second*

Minimum Angular Rate: 0° per second*

Accuracy (RMS): 1° in yaw, 0.25° in pitch and roll at 25°C*

Angular Resolution: O.O1 ° RMS*

Max Update Rate: 200 Hz, 1000 Hz available for USB (contact Thales)

Minimum Latency: 2 ms for RS-232 (PC host and OS dependent)

Prediction: up to 50 milliseconds

Interfaces: USB or RS-232

RS-232 Rate: 115200 baud

Size: $36.6 \text{ mm} \times 27.7 \text{ mm} \times 13.8 \text{ mm}$

Weight: 11 grams

Cable Length: USB 6 feet (2 m), RS-232

15 feet (4.572 m)

Power: 6 VDC, 40 mA

Operating Temp. Range: 0° to 50° C

O/S Compatibility: Windows, Linux, and

Mac OS X

Software Features

Compass Calibration Tool compensates for the effects of static magnetic field distortions

Magnetic Environment Calibration Tool prevents performance degradation by dynamic detection of magnetic disturbances

U.S. Patents

5,645,077; 5,807,284; 6,162,191; 6,176,837; 6,314,055; 6,361,507; 6,409,687; 6,474,159; 6,681,629; 6,757,068; 6,786,877; 6,922,632; and 7,000,469

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 $^{^*}$ Measurement with perceptual enhancement set to '0' (at +25 $^\circ$ C) Specifications are subject to change without notice.