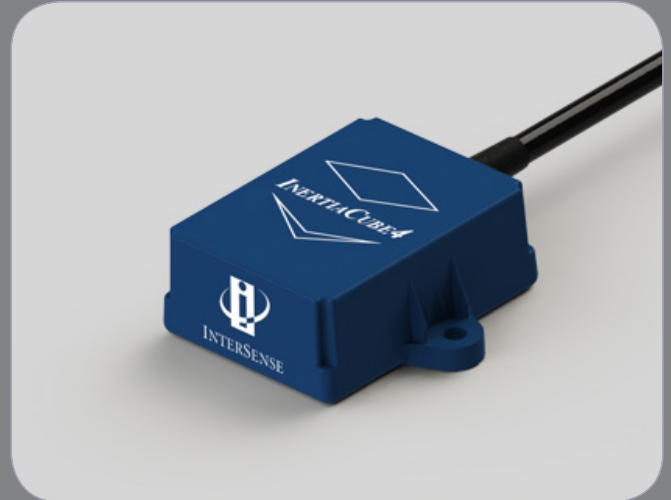# InterSense
Sensing Every Move

INERTIACUBE4

Precision inertial orientation sensor

The InertiaCube4 offers superior performance over its predecessors while minimzing size and price. The sensor is ideal for real-time applications in simulation & training, virtual & augmented reality, motion capture, and human movement analysis.

The InertiaCube4 integrates the latest in MEMS inertial technology and utilizes advanced Kalman filtering algorithms to produce a full 360° sourceless orientation tracking sensor

Features

- 200 Hz update rate with adjustable motion prediction
- 2000° maximum angular rate
- Serial or Native USB interface
- Full precision factory calibration
- Adjustable output filters and rotational sensitivity
- Full SDK for multiple platforms
- OEM packaging available
- CE, UL, RoHS compliant

InertiaCube4 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 & roll at 25°C
Angular Resolution*	0.01° RMS
Update Rate	200 Hz
Minimum Latency	2 ms for RS-232 (PC host OS dependent)
Prediction	up to 50 milliseconds
Serial Rate	115.2 kbaud
Interface	USB or RS-232 Serial
Size	1.44 in. x 1.09 in. x 0.55 in. (36.6 mm x 27.7 mm x 13.8 mm)
Weight	0.39 ounces (11 grams)
Cable Length	USB 6 ft. (2 m) RS-232 15 ft. (4.572 m)
Power	6 VDC, 40 mA
Operating Temp. Range	0° to 50° C
O/S Compatibility	.dll for Windows 7/XP .so for Linux .dylib for Mac OS X

* measurement with perceptual enhancement set to '0'

Additional Software Features

- Compass Calibration Tool compensates the effects of static magnetic field distortions
- Magnetic Environment Calibration Tool prevents performance degradation by dynamic detection of magnetic disturbances

[.54] 13.8   [.06] 1.5

[.122] Ø 3.1 2 places

[.12] 3

Tip (0,0,0) point

[1.58] 40.1   [1.09] 27.7

[.23] 5.8   [.60] 15.2   [.55] 14

[1.44] 36.6

[in.] mm   All dimensions typical

InterSense is brand of Thales Visionix, Inc.