

# InterSense InertiaCube2



## Precision Orientation Reference System

- Inertial-based tracking from integration of nine sensing elements
- Sourceless tracking with full 360° range
- 180 Hz update rate with adjustable motion prediction
- Adjustable output filters and rotational sensitivity
- SDK for OEM applications on Windows, Linux, IRIX and Macintosh OS X platforms
- Software libraries support up to 32 sensors simultaneously
- Windows software provides simple configuration, network interface and joystick emulation
- CE compliant and UL approved

The InertiaCube2 integrates nine discrete, miniature sensing elements with advanced Kalman filtering algorithms producing a full 360°, precision, sourceless orientation tracking system. Its simple serial or USB interface with support software provides a rapid development cycle for OEM applications.

Ideal for head tracking in simulation and training applications, the InertiaCube2 is also used with systems for navigation of robotic & autonomous vehicles, 3D medical imaging, virtual & augmented reality, antenna & platform stabilization, location-based entertainment and attitude & heading reference systems.

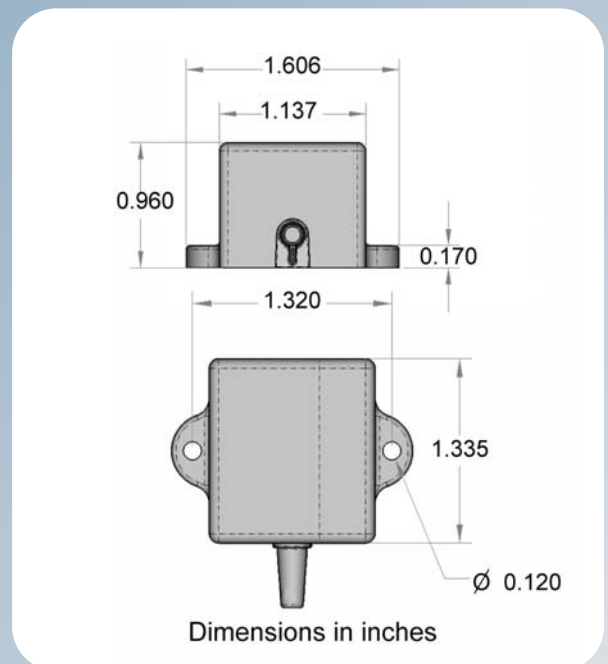
## InertiaCube2 Specifications

Degrees of Freedom	3 (Yaw, Pitch and Roll)
Angular Range	Full 360° - All Axes
Maximum Angular Rate*	1200° per second
Minimum Angular Rate*	0° per second
Accuracy*	1° RMS at 25°C
Angular Resolution*	0.01° RMS
Serial Interface Update Rate	180 Hz
Minimum Latency	2 ms for RS-232 (PC host OS dependent)
Prediction	up to 50 milliseconds
Serial Rate	115.2 kbaud
Interface	RS-232 Serial (shown above)
Size	1.137 in x 0.960 in x 1.335 in (28.89 mm x 24.38 mm x 33.91 mm)
Weight	0.88 ounces (25.00 grams)
Cable Length	15 ft. (4.572 m) - Max. 75 ft (22.86 m)
Power	6 VDC, 100 milliamps via AC adapter
Operating Temperature Range	0° to 50° C
O/S Compatibility	.dll for Windows 98/2k/NT/XP/CE .so for Linux and SGI IRIX libisense.dylib for Mac OS X
Software Support	SDK with full InterSense API Windows Control & Connectivity Software Ethernet w/ Windows Control Software

\*Measurements with perceptual enhancement algorithm turned off (= 0)

### Optional USB Adapter Specifications

InterSense USB Update Rate	180 Hz (Windows 98/2000/XP) 180 Hz (Macintosh OS X)
USB Interface Minimum Latency	2 ms for USB direct (PC host OS dependent)
Power Source	Direct from Host USB Port
USB Adapter Size	2.36 in x 1.38 in x 0.79 in (60 mm x 35 mm x 20 mm)
Cable Length	9.84 feet (3 meters)



**InterSense, Inc.**

36 Crosby Drive, Suite 150 • Bedford, MA 01730

+1 781 541 6330 • FAX +1 781 541 6329 • info@intersense.com

 **INTERSENSE**  
www.intersense.com