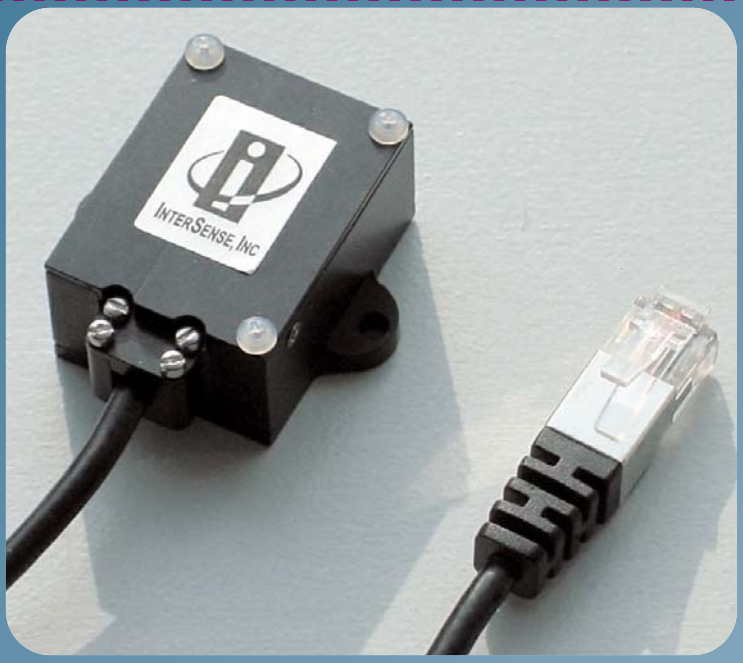
InterSense InertiaCube3



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*
- *MagCal software for in-situ heading calibration*
- *Wireless and Dedicated Processor Options*

The InertiaCube3 is the world's smallest inertial orientation reference system. Providing full 360° sourceless tracking in all axes, the InertiaCube3 integrates nine discrete, miniature sensing elements with advanced Kalman filtering algorithms. Its simple serial or USB interface with support software provides a rapid development cycle for OEM applications.

The low power consumption and wide temperature range of the InertiaCube3 make it ideal for head or body tracking in mobile simulation, training and situational awareness applications. Standard heading calibration software compensates for static magnetic field distortions when the InertiaCube3 is deployed in adverse environments. The InertiaCube3 is available with both wireless and dedicated processor options.

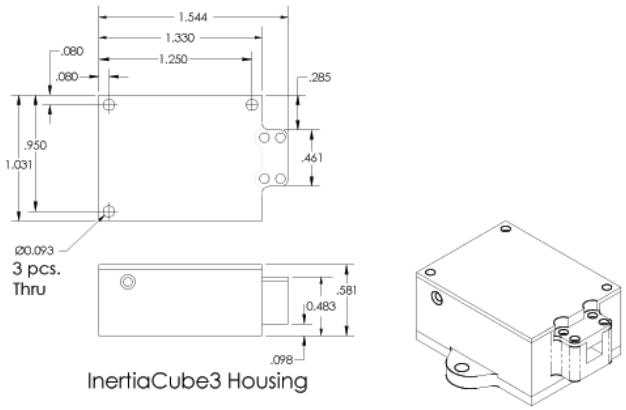
InertiaCube3 Specifications

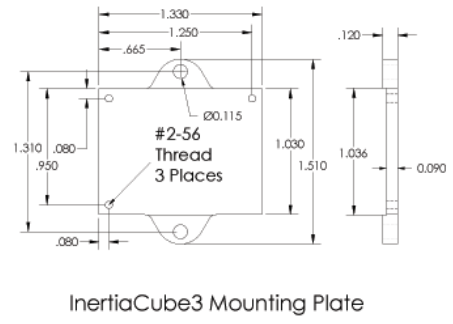
Degrees of Freedom	3 (Yaw, Pitch and Roll)
Angular Range	Full 360° - All Axes
Maximum Angular Rate*	1200° per second
Minimum Angular Rate*	0° per second
RMS Accuracy*	1° in yaw, 0.25° in pitch & roll at 25°C
RMS Angular Resolution*	0.03°
Serial Interface Update Rate	180 Hz
Minimum Latency	2 ms for RS-232 (PC host OS dependent)
Prediction	up to 50 milliseconds
Serial Rate	115.2 kbaud
Interface	RS-232 Serial (shown above)
Size (without mounting plate)	1.031 in x 1.544 in x 0.581 in (26.2 mm x 39.2 mm x 14.8 mm)
Weight	0.6 ounces (17.0 grams)
Cable Length	15 ft. (4.572 m) - Max. 75 ft (22.86 m)
Power	6 VDC, 40 milliamps
Operating Temperature Range	0° to 70° C (commercial) -40° to 85° C (industrial)
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 Ethernet via Windows Control Software Heading Calibration Software

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

Optional USB Adapter Specifications

InterSense USB Update Rate	180 Hz (Windows 98/2000/XP) > 40 Hz (Macintosh OS X)
USB Interface Minimum Latency	2 ms for USB direct (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)





InertiaCube3 Dimensions in inches

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