

InterSense PCTracker



Cost Effective 6-DOF Tracking

- Low cost system utilizes IS-900 technology
- Ideal for desktop or small area tracking
- Inertial/Ultrasonic 6-DOF Tracking
- Factory calibrated for simple set-up & configuration
- Immune to metallic, acoustic, and optical interference
- Consistent accuracy over entire tracking volume
- Superior motion prediction algorithms
- Adjustable precision & sensitivity filters
- Windows PC software provides simple, flexible configuration

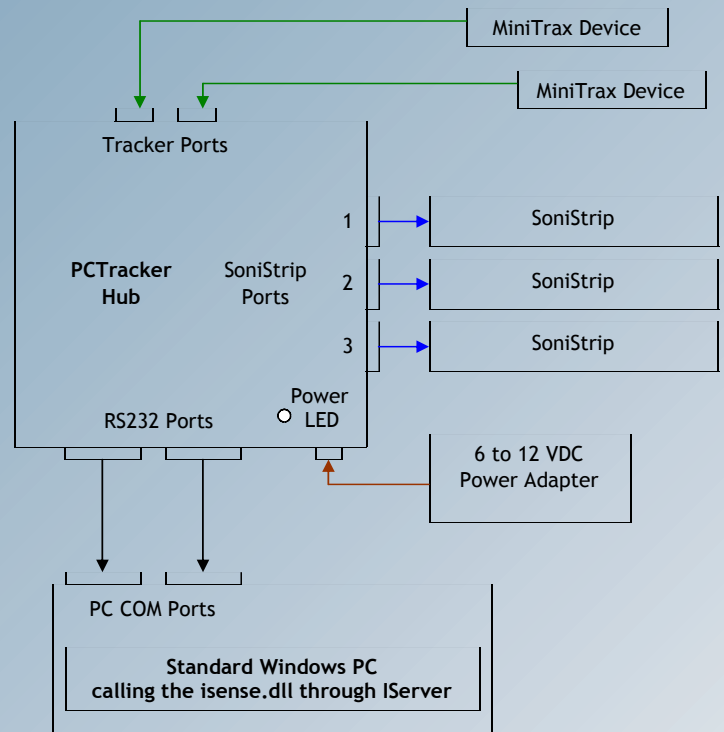
The cost effective PCTracker is based on InterSense's award winning IS-900 technology. Designed specifically to take advantage of fast, Windows-based computers with modern graphics engines, the PCTracker is built for the budget conscious user.

The PCTracker is a 6 degree of freedom (6-DOF) motion tracking system utilizing InterSense's hybrid technology of inertial and ultrasonic tracking. The position and orientation of the tracking stations are determined with our advanced Kalman filter algorithms which combine the output of the inertial sensors with range measurements obtained from the ultrasonic components. The result is full 6-DOF data that is very smooth, precise, and free from jitter.

Chosen by system integrators for simplicity and its flexible configuration, the PCTracker is ideal for OEM applications. Custom integration of tracking devices for volume applications is available from InterSense.

PCTracker Specifications

Degrees of Freedom:	6 (X, Y, Z, Yaw, Pitch, and Roll)
Standard Tracking Device:	MiniTrax Wired Head Tracker
Optional Tracking Devices:	MiniTrax Wired Wand
(total of two devices max.)	MiniTrax Wired Hand Tracker
	MiniTrax High Accuracy Head Tracker
Custom/OEM MiniTrax Devices:	Consult InterSense
Standard Tracking Volume:	2.0 m x 2.0 m x 3.0 m with SoniFrame
(choose option with order)	1.5 m x 1.5 m x 3.0 m with SoniWing
Angular Range:	Full 360° - All Axes
Resolution (Position):	0.75 mm
Resolution (Orientation)	0.05°
Static Accuracy (Position RMS):	2.0 to 3.0 mm
Static Accuracy (Orientation RMS)	0.25° in Pitch & Roll, 0.50° in Yaw
Serial Interface Update Rate:	100 - 130 Hz (OS and PC Host Dependent)
Minimum Latency:	4 ms Typical (OS and PC Host Dependent)
Interface:	RS-232 Serial Port(s)
	(Two tracking devices require two serial ports)
Power:	6 - 12 VDC via AC to DC adapter
Power Consumption:	200 milliamps Max
	(configured with two MiniTrax Head Trackers)
O/S Compatibility:	Windows 98/2000/Millennium/XP
Maximum Cable Lengths	PCTracker Hub to SoniStrips - 4.5 m
	PCTracker Hub to Tracking Devices - 4.25 m
	PCTracker Hub to Host PC - 2.0 m
Software Support	IServer Software and isense.dll
	SDK with full InterSense API
	Windows control & connectivity software



PCTracker System Architecture

InterSense, Inc.

36 Crosby Drive, Suite 150 • Bedford, MA 01730

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

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www.intersense.com