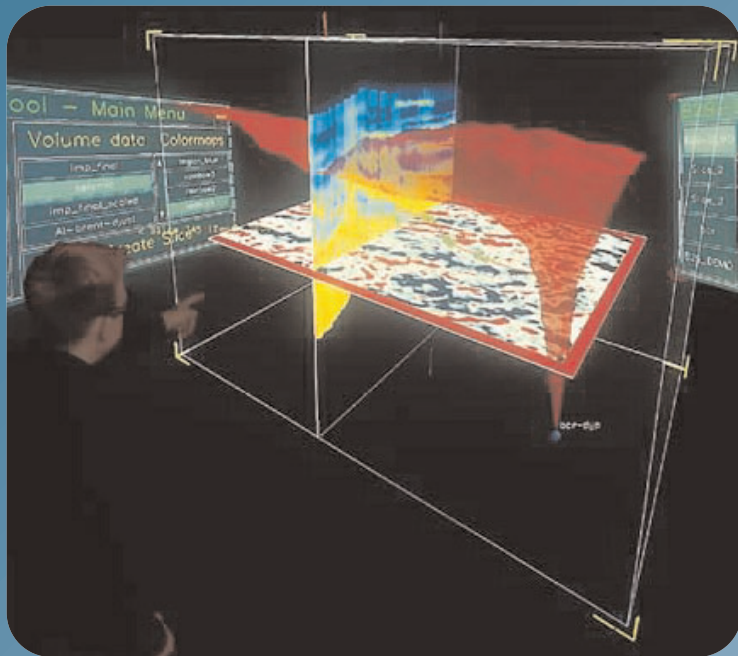


InterSense IS-900 Systems



Precision 6-DOF Motion Tracking

- *Interference free, wide area motion tracking for:*
 - *Simulation and training systems*
 - *Immersive and Head Mounted Displays*
 - *CAVE^(tm)s, Power Walls, Reality Centers*
 - *Visualization Systems*
 - *Augmented and Mixed Reality Systems*
- *Flexible configuration options*
- *Wireless tracked devices*
- *SDK for OEM applications on Windows, Linux and IRIX platforms*
- *Windows software provides simple configuration and network interface*

The IS-900 product family, based on patented Constellation™ technology, delivers extremely precise and accurate wide area, interference free, head, hand and object tracking for the most demanding immersive 3D applications. From CAVEs™, PowerWalls™ and head mounted displays (HMDs), to rooms, buildings and simulators, the IS-900 product line offers the ideal, precision motion tracking solution for your specific application.

The IS-900 is conveniently offered in two different product configurations to meet your demanding tracking requirements. The IS-900 SimTracker is ideal for cockpit and desktop simulators or small immersive display walls. The IS-900 VETracker (Virtual Environment Tracker) is built for CAVEs, PowerWalls or any large area tracking application. All IS-900 systems support the small and lightweight MiniTrax tracked devices for head, hand and object tracking. Both configurations ship standard with a MiniTrax head tracker and tracked, multi-button wand & joystick compatible with many immersive system applications. All standard IS-900 tracked devices can be upgraded for wireless connections to the IS-900 processor providing freedom from cables in the tracking environment. InterSense's InertiaCube2 can also be used as a 3-DOF tracked device with the IS-900.

IS-900 Product Configurations

Product Features

Standard Tracking Volume
Maximum Tracking Area
Maximum SoniStrips
Maximum Tracked Devices
Upgradable to Wireless

IS-900 SimTracker

2.0 x 2.0 x 3.0 m
20 m²
12
4 Tracked Devices (MiniTrax or InertiaCube2)
Yes

IS-900 VETracker

3.0 x 3.0 x 3.0 m
140 m²
84
7 Tracked Devices (MiniTrax or InertiaCube2)
Yes

Standard Components

Tracked Devices

MiniTrax Head Tracking Station

Tracked Wand w/ Buttons & Joystick

4 SoniStrips or 3 SoniStrips with SoniFrame

MiniTrax Head Tracking Station

Tracked Wand w/ Buttons & Joystick

6 SoniStrips

Position Referencing Constellation

Optional Components

Tracking Area Expansion
Tracked Devices

SoniWing, SoniFrame, additional SoniStrips (2, 4 or 6 foot) or individual SoniPods.
Wired or Wireless MiniTrax Hand, High Accuracy Head and Helmet Trackers
InterSense's InertiaCube2 (3-DOF only)

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 **INTERSENSE**
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InterSense IS-900 Specifications

Performance Specifications

Degrees of Freedom:	6 (X, Y, Z, Yaw, Pitch, and Roll) with MiniTrax Devices 3 (Yaw, Pitch, and Roll) with the InertiaCube2
Tracking Device(s):	MiniTrax Wired Head Tracker (Standard) MiniTrax Wired Wand (Standard) MiniTrax Wired Hand Tracker (Optional) MiniTrax High Accuracy Head Tracker (Optional) Custom/OEM MiniTrax Devices (Consult InterSense)
Tracking Volume:	Up to 20 m ² with 12 SoniStrips (SimTracker maximum) Up to 140 m ² with 84 SoniStrips (VETracker maximum) 2.0 m x 2.0 m x 3.0 m maximum w/ SoniFrame (optional) 1.5 m x 1.5 m x 3.0 m with SoniWing (optional)
Angular Range:	Full 360° - All Axes
Resolution:	0.75 mm (1.5 mm Wireless) 0.05° (0.10° Wireless)
Static Accuracy:	2.0 to 3.0 mm (3.0 to 5.0 mm Wireless) 0.25° RMS in Pitch & Roll, 0.50° RMS in Yaw (Standard MiniTrax) 0.25° RMS in Pitch, Roll and Yaw (High Accuracy MiniTrax) 0.50° RMS in Pitch & Roll, 1.00° RMS in Yaw (Wireless MiniTrax) 0.50° RMS in Pitch, Roll and Yaw (Wireless High Accuracy MiniTrax)
Update Rate:	180 Hz Nominal (120 Hz Nominal Wireless)
Latency:	4 ms Typical
Interface:	RS-232 Serial Port Ethernet (Optional)
O/S Compatibility:	Windows 98/2000/Millennium/XP, Linux, SGI IRIX, Sun Solaris, HP AUX, Mac OS X
Software Support:	SDK with full InterSense API ISDEMO control & connectivity software

Physical Specifications

AC Input:	100 to 120 V/200 to 240 V, 60/50 Hz, 6/3 A (auto switching)	
Operating Temperature:	0° C to 50° C (32° F to 122° F)	
Storage Temperature:	-20° C to 70° C (-4° F to 158° F)	
Standard Cable Lengths:	IS-900 to SoniStrips - 10.7 m IS-900 to Tracking Devices - 12.0 m IS-900 to Host (RS-232 Serial) - 1.8 m	
Maximum Cable Lengths:	System configuration dependent - Consult InterSense	
Processor Size:	1 U rack mounted (44.45 cm wide x 40.64 cm deep x 4.45 cm tall)	
Processor Weight:	6.8 kg	
SoniStrip	Size	Weight
2 foot	0.61 m x 3.7 cm x 2.5 cm	0.4 kg
4 foot	1.22 m x 3.7 cm x 2.5 cm	0.9 kg
6 foot	1.83 m x 3.7 cm x 2.5 cm	1.3 kg
MiniTrax Devices	Size (outside dimensions)	Weight
Standard Head Tracker	9.4 x 2.7 x 2.7 cm	23 g
High Accuracy Head Tracker	20.5 x 3.0 x 2.7 cm	38 g
Wand	10.0 x 17.0 x 5.5 cm	140 g wired (220 g wireless)
Hand Tracker	10.0 x 8.0 x 4.4 cm	44 g
Helmet Tracker	16.5 x 11.0 x 5.0 cm	128 g
Wireless Transmitter	6.0 x 10.0 x 2.5 cm	150 g
Wireless Receiver	11.0 x 8.5 x 3.5 cm	157 g

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