



- ◆ *Wide area tracking*
- ◆ *Multi-point tracking*
- ◆ *Extreme precision and accuracy*
- ◆ *Easy setup wizard and Automap*
- ◆ *Wide software compatibility*

InterSense IS-900 Precision Motion Tracker

The IS-900 product family, based on patent-pending CONSTELLATION™ technology, delivers extremely precise and accurate wide area, interference free head, hand and object tracking for the most demanding immersive graphics applications.

IS-900 Product Family

The IS-900 product line represents a breakthrough in precision motion tracking for all types of immersive 3D applications.

With the most precise, real-time, 6DOF, multi-point tracking on the market, the Constellation design of the IS-900 offers users the ability to track head, hands and objects over a virtually unlimited range, in an easily installed and expandable system.

Using our proprietary SensorFusion software to combine the latest advances in inertial and ultrasonic tracking, the IS-900 delivers tracking resolution in the millimeter range for position, and below 0.1° for orientation.

From CAVEs™, PowerWalls™ and ImmersaDesks™, to rooms and buildings, the IS-900 product line offers the ideal, precision motion tracking solution for your specific application.

IS-900 Configurations

The IS-900 line is available in a variety of standard configurations to meet the demands of any immersive graphics application.

IS-900 VET

Virtual Environment Tracker

Full 3D volume tracking for immersive display systems such as CAVEs, CUBEs, ReaCTors and other cubic stereo facilities

IS-900 VWT

Virtual Workbench Tracker

Immersive table tracking system for workbench displays such as Barons, V-Desks and ImmersaDesks.

IS-900 LAT

Large Area Tracker

Flexible configurations for Reality Centers™, wall displays, rooms, buildings and spherical or cylindrical display systems.

System Overview

Each IS-900 system is comprised of a SensorFusion base unit, a series of pre-assembled ultrasonic SoniStrips that can cover up to 900m² (LAT only), and multiple omnidirectional tracked stations.

Standard IS-900 stations include a comfortable, lightweight 6DOF stylus with 2 buttons, an ergonomically designed handheld wand with 5 buttons and 2-axis proportional joystick, and a tracking station customized to attach seamlessly to the StereoGraphics CrystalEyes™ 3D shutter glasses.



IS-900 Specifications

Technical

Degrees of Freedom	6 (per station)
Resolution	Typical :
Position (X/Y/Z)	1.5 mm RMS
Angular (P/R/Y)	0.05° RMS
Stability	Typical :
Position (X/Y/Z)	4 mm RMS
Angular (P/R, Y)	0.2°, 0.4° RMS
Max update rate	Serial – 115.2 k baud
1 station	180 Hz
2 stations	180 Hz
3 stations	120 Hz
4 stations	90 Hz
Genlock options	NTSC TTL (25-120 Hz) Programmable internal sync
Prediction range	50 ms
Latency	4-10 ms (w/ no prediction)
Interface	RS-232 to 115.2 kbaud Ethernet optional (Q1 00)
Protocol	Industry standard protocols Compatible with IS600/ IS-300

Physical

Standard Components	SensorFusion base unit SoniStrips (long/short) Auto-mapping station Wand or Stylus station CrystalEyes station
Options	Wand station Stylus station CrystalEyes station 4 Port expansion hub (12 SoniStrips) SoniStrip expansion packs
Future options	Generic station Wrist station HMD station
Cable length	9m standard 6m extension optional
Dimensions	
Base Unit	425mm x 305mm x 101mm
Long SoniStrip	1.9m x 37mm x 22 mm
Short SoniStrip	1.3m x 37mm x 22 mm
Power	100-240 VAC, 100W

<u>Configurations</u>	<u>IS-900 VWT</u>	<u>IS-900 VET</u>	<u>IS-900 LAT</u>
Standard Tracking Volume	2m x 1.5m x 2m	3m x 3m x 3m	6m x 6m x 3m
Max Tracking Area	20m ²	225m ²	900m ²
Max SoniStrips	12	84	300
Max expansion hubs	0	6	24
Individual Beacons	No	No	Yes
Max Simultaneous Stations	4 (within 3m)	4 (within 3m)	4 (within tracked area)
Standard Components	Base unit Stylus station CrystalEyes station 4 SoniStrips	Base unit Wand station CrystalEyes station Auto-mapping station 6 SoniStrips	Base unit Wand station CrystalEyes station Auto-mapping station 4 Port expansion hub 24 SoniStrips
Expansion Options	3 SoniStrips (2m x 2m) 6 SoniStrips (3m x 3m)	3 SoniStrips (2m x 2m) 6 SoniStrips (3m x 3m) 12 SoniStrips (3m x 6m) 4 Port expansion hub	3 SoniStrips (2m x 2m) 6 SoniStrips (3m x 3m) 12 SoniStrips (3m x 6m) 4 Port expansion hub

For more information:

Tel: +1 781270 0090
 Fax: +1 781 229 8995
 Toll-free: +1 888 FLY THRU
 Email: info@isense.com
 Web: www.isense.com



The New Standard in Motion Tracking