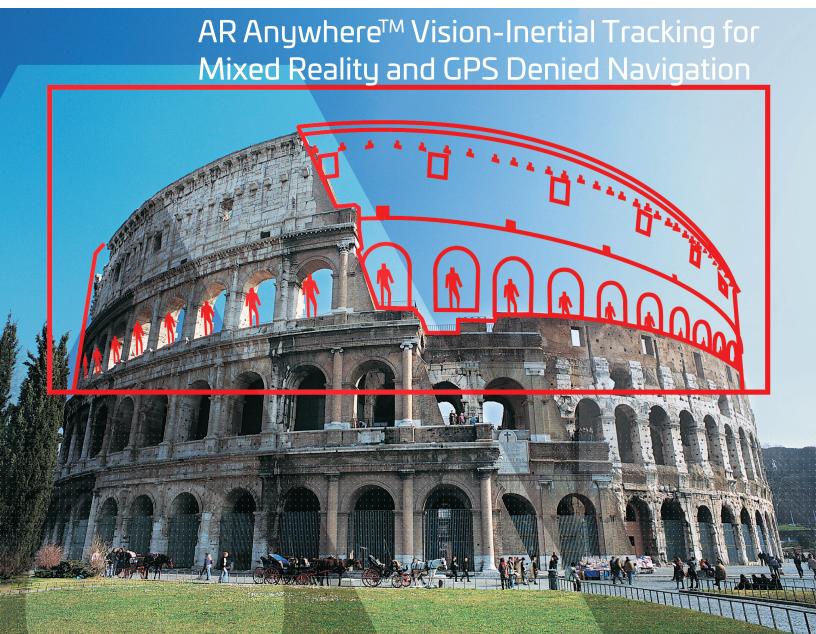


# InterSense® IS-1500® Optical-Inertial Sensor



# InterSense® IS-1500® AR Anywhere<sup>TM</sup> Optical-Inertial Sensor

The IS-1500® tracking system architecture enables a lightweight, mobile Vision-Inertial Navigation approach to Natural Feature Tracking that utilizes the natural world as a tracking reference. The small, lightweight InertiaCam vision-inertial sensor includes our NavChip IMU and lets you track an object or person anywhere at any time from your mobile computing platform with maximum precision that's ideal for augmented reality and GPS-denied navigation applications. Combined with optional marker-based (Fiducial) tracking, the IS-1500 represents truly flexible next generation capability.

## **Technical Specifications**

### **Key Features**

- ➤ Unprecedented Tracking Capabilities
- ➤Total Mobility
- ➤ Ruggedness and Reliability
- **➤** Simplicity

Overall Specifications		
Pitch and Roll Accuracy	0.25° RMS	
Max Angular Rate and Linear Acceleration	2000 °/s, 16 g	
Latency (average)	10 milliseconds (prediction off)	
Prediction	Up to 50 milliseconds	
Synchronization	Virtual (software)	
Supported	Windows & Linux	
Operating Systems	(contact sales for	
	other operating systems)	

Tracking Performance: Fiducial Markers		
Position Accuracy	2mm (typical)	
Max Tracking Distance from Fiducials	20x the Fiducial diameter	
Min Fiducials in View for Pose Recovery	2 (recommend 10-12 for optimal performance)	
Orientation Drift Rate with no Fiducials	0.6°/minute (RMS)	

InertiaCam Sensor Module		
Dimensions	65mm X 20mm X 20mm	
Mass (not including cable)	36 grams (metal reference design housing)	
Interface (power and data)	Single USB 2/3 cable	
	(type-c connector)	
Power Consumption	1.2 watts (typical)	
Temperature	-20° to 65° C,	
(Operating/Storage)	-30° to 85° C	
Humidity	20 to 80%, 20 to 95%	
(Operating/Storage)	(non-condensing)	

Tracking Performance: Natural Features	
Position Drift (traveling)	1% of distance traveled (RMS)
Yaw Drift (traveling)	0.7°/minute (RMS)
Static Wander	±1 cm position, 1° Yaw (RMS)
Global Relocation Accuracy	See Fiducial marker accuracy above

Specifications are subject to change without notice.

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