

# **PATRIOT WIRELESS**

# TOTALLY WIRELESS TRACKING WITH EXPANDABLE COVERAGE

Experience high performance motion tracking while moving freely without any tethers or wires in your tracking environment. PATRIOT<sup>™</sup> WIRELESS offers 1-4 embeddable, wireless markers for full 6DOF tracking, using proprietary A/C electromagnetic technology.



#### **HOW IT WORKS**

Self contained markers can be placed anywhere on the body or an object and do not require line-of-sight for continuous tracking. Magnetic fields are generated by the markers and both position and orientation data are output, without the need for post analysis calculations. Accurate, high-quality data is delivered with an update rate of 50Hz per marker.

#### SCALABLE

Adding markers (up to four per system) increases the number of objects or people being tracked. Upgrading with an additional receptor expands the area of coverage up to 24 linear feet.

#### **FEATURES**

- Completely Wireless
- Freedom of Movement
- Fully Embeddable Markers
- Scalable Area of Coverage
- No Line-of-Sight Occlusions
  Zero Drift
  Full 6DOF Tracking
  Multiple Applications or Users







# COMPONENTS

The PATRIOT WIRELESS system includes an SEU (Systems Electronics Unit), one marker, and one receptor. A single high-capacity battery charger is included with each marker. Add additional markers easily, and ask about how to upgrade to expand the coverage area.

## SYSTEM ELECTRONICS UNIT

The SEU contains the hardware and software necessary to sense the magnetic fields generated by the markers, compute position and orientation, and interface with the host computer via RS-232 or USB. DIMENSIONS: 6.77 in (17.19 cm) x 6.26 in (15.90 cm) x 1.65 in (4.19 cm)

### WIRELESS MARKER

Marker weighs 2.8 ounces and can be easily attached to the body or object as needed.

WEIGHT: 2.8 ounces (79.4 g) DIMENSIONS: 3.50 in (8.89 cm) x 1.66 in (4.22 cm) x .97 in (2.46 cm)

## RECEPTOR

This lightweight, small cube can be easily mounted to almost any surface.

WEIGHT: 3.2 ounces (90.7g) DIMENSIONS: 2.45 in (6.22 cm) x 1.45 in (3.68 cm) x 1.442 in (3.66 cm)

Dimensions and weight are approximate. Dimensional drawings available upon request.

## **SPECIFICATIONS**

UPDATE RATE	50Hz/marker	
INTERFACE	RS-232 with selectable baud rates up to 115.2 K USB 2.0 (high speed)	
LATENCY	Approximately 20 milliseconds	
STATIC ACCURACY	1.0 degree and 0.3 inch (0.75 cm) using one marker and one receptor at 30 inches (76.2 cm). Accuracy is installation dependent, typical accuracy may normally result in 1 to 3 degrees and 1 to 3 inches (2.54 cm to 7.62 cm).	
OPERATING TEMPERATURE	10°C to 40°C at a relative humidity of 10% to 95%, noncondensing	
POWER REQUIREMENTS	100-240 VAC, 50-60Hz, single phase, 4W	
SOFTWARE TOOLS	GUI and SDK included USB drivers for Microsoft Windows® included	
REGULATORY	FCC Part 15, class B CE: EN61326-1: 2013 EMC Requirements EN61326-1: 2013 Immunity : Basic Environment	

## RANGE VS RESOLUTION



ORIENTATION - POSITION

Marker-Receptor Range (feet)	Position Resolution (inches)	Orientation Resolution (degrees)
2	0.006	0.021
4	0.109	0.296
6	0.537	0.864
8	1.608	2.534
10	6.195	6.356

## **GET IN TOUCH**

Our technology powers applications in a wide variety of markets, catering to healthcare, military, and in countless research areas. Talk with our Motion Tracking Experts today.

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电话:010-50951355

网址:www.souvr.com

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