



## NO ROOM FOR ERROR.



Introducing the first affordable AHRS that stays on track while moving and when encountering magnetic distortion.

Unmanned vehicles are performing progressively more complex tasks – and requiring increasingly robust and accurate heading and orientation information. But existing AHRS modules leave too much room for error. They lose heading when encountering magnetic distortion; they suffer from errors when experiencing erratic motion; and often don't provide accurate headings, even in a static environment. And at more than \$2000 for a MEMS-based AHRS, it's no wonder AHRS have only been integrated by a select few customers.

So when there's no room for error, Trax stays on track.

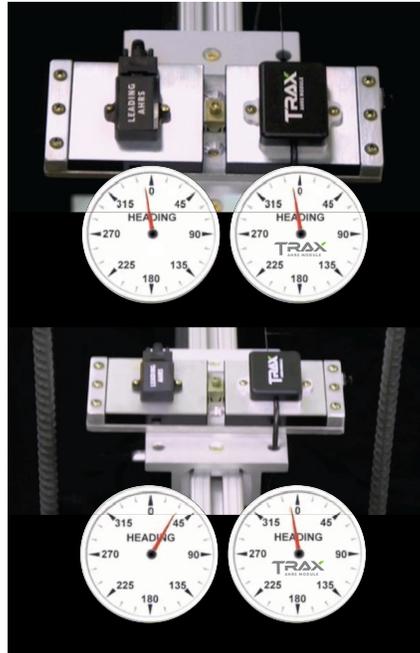
## When there's no room for error, TRAX stays on track.

The new FieldForce Trax AHRS provides unparalleled heading accuracy when static, while moving and when encountering magnetic distortion. Trax employs a patented Kalman filtering algorithm that intelligently fuses PNI's patented Reference Magnetic Sensors with gyros and accelerometers to overcome errors due to erratic motion and changes in the local magnetic field.

And Trax is priced for commercial use — delivering more reliable heading than AHRS modules that cost twice as much.

### Features:

- High Accuracy
- Magnetic distortion compensation
- Multiple field calibration options
- Low power consumption
- RS232 and USB interface
- RoHS compliant
- Backward compatible footprint



When exposed to magnetic distortion, TRAX maintains accurate heading — while the leading AHRS is thrown off track.

## Specifications<sup>1</sup>

Performance Specifications	Heading	Range	360°
		Static Accuracy <sup>2</sup>	0.3° rms
		Accuracy in presence of magnetic transient, and/or dynamic motion <sup>3</sup>	2° rms
		Resolution	0.1°
		Repeatability <sup>4</sup>	0.05° rms
Tilt	Range	±90 of pitch, ±180 of roll	
	Accuracy	.2° rms	
	Resolution	0.1°	
	Repeatability <sup>4</sup>	0.05° rms	
	Maximum Dip Angle	85°	
I/O Characteristics	Communication Interface	RS232 & USB	
Mechanical Characteristics	Dimensions (l x w x h)	3.5 x 4.3 x 1.0 cm	
	Weight	9 gm	
Power Requirements	Supply Voltage (unregulated)	3.6 - 5 VDC	
	Current Draw (continuous output)	60 mA	
Temperature Range	Operation	-40° C to +85° C	
	Storage	-40° C to +85° C	

1. Product specifications are preliminary and subject to change
2. Compass Mode
3. AHRS Mode
4. When Trax remains stationary and magnetic field is changed.

	2-AXIS
	3-AXIS
	HARD AND SOFT IRON CORRECTION
	INTEGRATED PROCESSOR
	LOW POWER
	DYNAMIC MOTION CONTROL

PNI MAGNETO-INDUCTIVE ORIENTATION SENSORS can tell you if something is up or down, sideways or facing east. They can tell you where in space your handheld is, or track movement across a screen or down a ravine. They're reliably accurate underwater, in space, in a car, and at extreme temperatures — all with pin-point accuracy, and using far less power than other technologies.

PNI uses the existing power of the earth's magnetic field to measure position, orientation and heading, applying its patented Magneto-Inductive technology in each of its sensors and modules.

Many of today's leading companies are using PNI technology in their marquee products and across a wide spectrum of applications, including compassing, surveying equipment, sonar, robotics, vehicles and oceanography equipment.

For ordering information and most current specifications, please visit [www.pnicorp.com](http://www.pnicorp.com)

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