



# TRAX2 Attitude & Heading Reference System (AHRS) & Digital Compass

Accurate orientation even when GPS is not available



**TRAX2 incorporates PNI's military-grade magnetic sensors with proven sensor fusion and digital compass algorithms to provide accurate direction and orientation without the assistance of GPS.**

Mission critical applications require accurate heading in any environment, moving or still, with or without GPS. Heading can be determined with a digital compass in a magnetically clean environment or with GPS when moving.

TRAX2 is the only AHRS in its class that continuously corrects for gyro drift and provides absolute heading without any additional input such as GPS. Its patented magnetic anomaly rejection algorithms automatically isolate the earth's magnetic field from other stray magnetic fields enabling accurate heading in any environment.

## Features & Benefits

- Accurate heading in the most demanding environments: indoors, outdoors, under canopy, in canyons, moving or still
- Optimized SWaP-C for endless design flexibility
- AHRS mode incorporates PNI's 15 state Kalman filter with user-adjustable knobs to tune the algorithms for specific applications and conditions
- Multiple calibration methods ensure accuracy in a wide range of industrial, scientific, marine and military applications
- ITAR-free



## Technical Specifications\*

Performance Specifications	Heading	Range	360°
		Digital Compass	0.3° rms
		AHRS	2.0° rms
		Resolution	0.1°
		Repeatability	0.05° rms
	Tilt	Range	±90° of pitch, ±180° of roll
		Accuracy	0.2° rms
		Resolution	0.01°
	Repeatability	0.05° rms	
I/O Characteristics	Communication Interface	RS232 & TTL	
Mechanical Characteristics	Dimensions (l x w x h)	3.5 x 4.3 x 1.0 cm	
	Weight	7 gm	
Power Requirements	Supply Voltage (unregulated)	3.7 – 9 VDC	
	Current Draw (in AHRS mode)	21 mA	
	Current Draw (in compass mode)	17 mA	

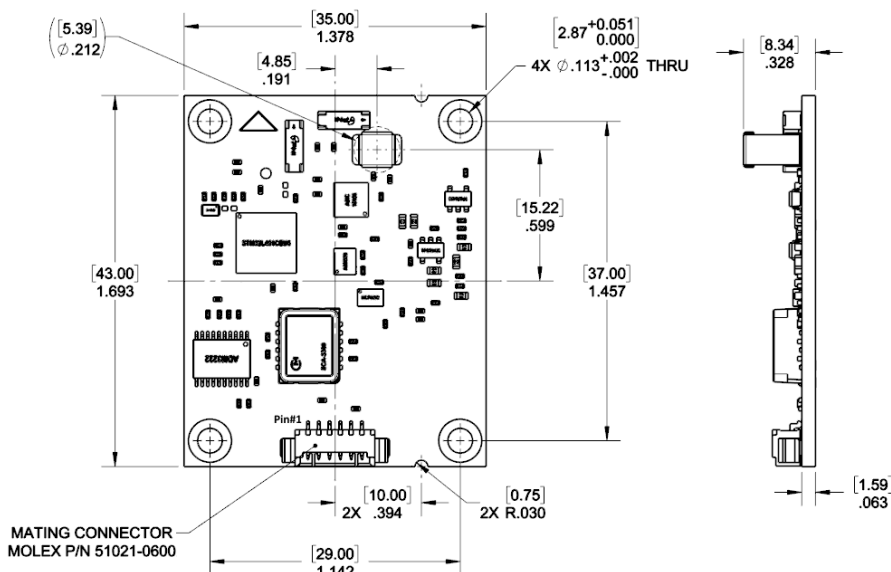


With over 30 years of experience, PNI is the world's foremost expert in precision location, motion tracking, and fusion of sensor systems into real-world applications.

PNI's sensors and algorithms serve as the cornerstone of successful IoT projects and other mission-critical applications where pinpoint location, accuracy, and low power consumption are essential.

Building on decades of patented sensor and algorithm development, PNI offers the industry's highest-performance geomagnetic sensor in its class, location and motion coprocessors, high-performance modules, sensor fusion algorithms, and complete sensor systems.

To learn more, please visit [www.pnicorp.com](http://www.pnicorp.com).



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\*Specifications are subject to change.  
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