PNI | TRAX2 Attitude & Heading Reference System (AHRS) & Digital Compass

Accurate orientation in demanding conditions

TRAX2 incorporates PNI's military-grade magnetic sensors with proven sensor fusion and digital compass algorithms to provide accurate direction and orientation.

TRAX2 is the only orientation module that provides two different modes: AHRS or digital compass. TRAX2's dual-mode capability supports a wide range of applications including laser range finders, drones, robotics, manned and unmanned vehicles, among others.

TRAX2 combines PNI's high-sensitivity magneto-inductive sensors with a high stability 3-axis MEMS accelerometer to provide accurate heading information under a wide variety of conditions and the ability to overcome errors caused by changes in the local magnetic field. This provides no drift, high accuracy heading, pitch and roll and long-term static accuracy.

Features & Benefits

- AHRS mode incorporates PNI's 15-state Kalman filter with user-adjustable knobs to optimize the algorithms for specific applications and conditions

- Gyro-stabilized compass for improved dynamic accuracy provides sub-0.5 degrees of heading accuracy

- Low latency and no overshoot for quick target acquisition

- Multiple calibration methods ensure accuracy in a wide range of military applications

- ITAR-free

Technical Specifications*

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	Heading	Range	360°
		Digital Compass	0.3° rms
		AHRS	2.0° rms
		Resolution	0.1°
		Repeatability	0.05° rms
Performance Specifications	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

PNI

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.

DIMENSIONS IN [MM] / INCHES

MATING CONNECTOR MOLEX P/N 51021-0600
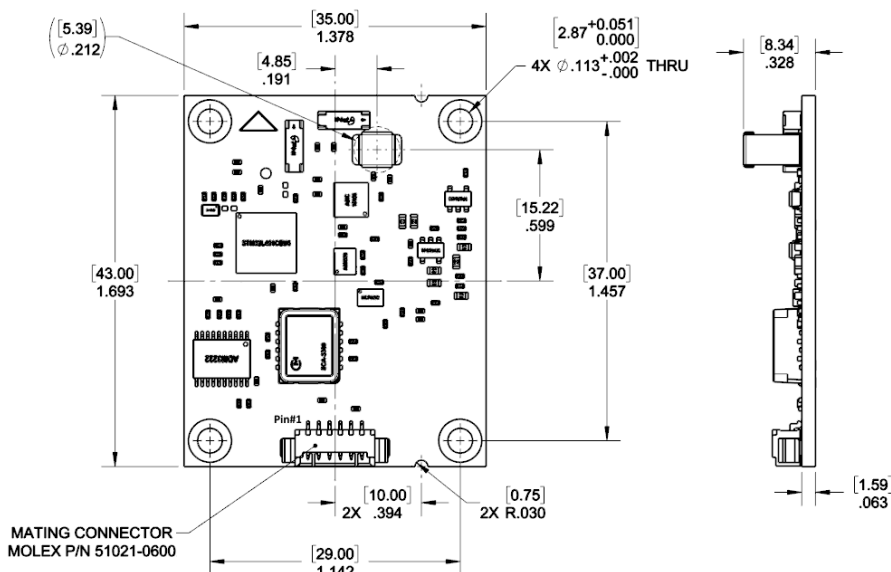
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