



## TECHNICAL SPECIFICATIONS

### PERFORMANCE

Inertial Acceleration (Accuracy / Range):	+/- 1 mg	+/- 2.5 / 10 g
Inertial Angular Rates (Accuracy / Range):	+/- 0.1 deg/s	+/- 150 / 300 deg/s
Navigation Solution Rate:	1 to 10 Hz	
Position Accuracy:	Standard: 1.5 m RMS	
	With SBAS: 0.7 m RMS	
Velocity Accuracy:	0.05 m/s RMS	
Carrier Phase Rate:	1 to 10 Hz	
Carrier Phase Noise:	0.6 mm RMS	
Attitude (Accuracy / Range):	Roll: 0.1 deg	+/- 180 deg
	Pitch: 0.1 deg	+/- 90 deg
	Yaw: 0.1 deg	+/- 360 deg
Output Rate:	User selectable up to 100 Hz	

### ELECTRICAL:

Operating Voltage:	9.0 to 36.0 VDC Input
Power:	3.2 Watts max.
Operating Current:	265 mA @ 12 VDC max. 115 mA @ 28 VDC max.
Digital Interfaces:	Controller Area Network (CAN2A) RS-232 Serial Ports

### ENVIRONMENTAL:

Operating Temperature:	-40 Celsius to +50 Celsius
Storage Temperature:	-45 Celsius to +90 Celsius

### PHYSICAL:

Dimensions [in (mm)]:	5.866 (149.0) X 4.094 (104.0) X 2.314 (58.8)
Weight:	1.00 lb      455 g

- ▶ VecTrax-10 is a high-accuracy, cost-effective, three-dimensional orientation/compass system which can be used to track any moving platform/vehicle.
- ▶ VecTrax-10 combines the absolute DC stability of a single-baseline GPS carrier phase system with inexpensive MEMS inertial sensors to provide a high accuracy, high frequency real-time attitude solution.
- ▶ The VecTrax-10 output data set includes:

**Inertial Accelerations ( X, Y, Z )**

**Inertial Angular Rates ( P, Q, R )**

**GPS Time, Position and Velocity**

**Attitude ( Roll, Pitch, Yaw [Heading] )**

- ▶ All sensor data can be stored to a USB FLASH memory drive inserted in the integrated USB port and then post-processed to generate a higher accuracy, higher frequency attitude solution.
- ▶ Applications include:

**Inexpensive Attitude and Heading Reference System (AHRS) for Airborne Systems**

**Positioning of Airborne Camera and LIDAR Systems**

**Land Vehicle Navigation**

**Shipboard Navigation**

**Unmanned Aerial Vehicle (UAV) Navigation**

- ▶ VecTrax-10 can be integrated with any Aventech Air Data System (ARIM200, ARIM310) to provide real-time, airborne meteorology including three-dimensional winds, temperature, relative humidity, and turbulence.
- ▶ Real-time data broadcast available via RS-232 or Controller Area Network (CAN) interfaces.
- ▶ Stand-alone operation capability with optional display module running Aventech VecTrax firmware.



**Optional 3.5" Sunlight Readable, Colour, Touch Screen Display Module**

Display:	3.5" Transreflective Colour TFT LCD Display 320 X 240 resolution 64 K Colours 80 Nit LED Backlight for Night Viewing
Operating System:	VecTrax Firmware v1.0
Dimensions [ in (mm) ]:	5.125 (130.2) X 4.000 (101.6) X 1.125 (28.6)
Weight:	0.75 lb.      340 g

