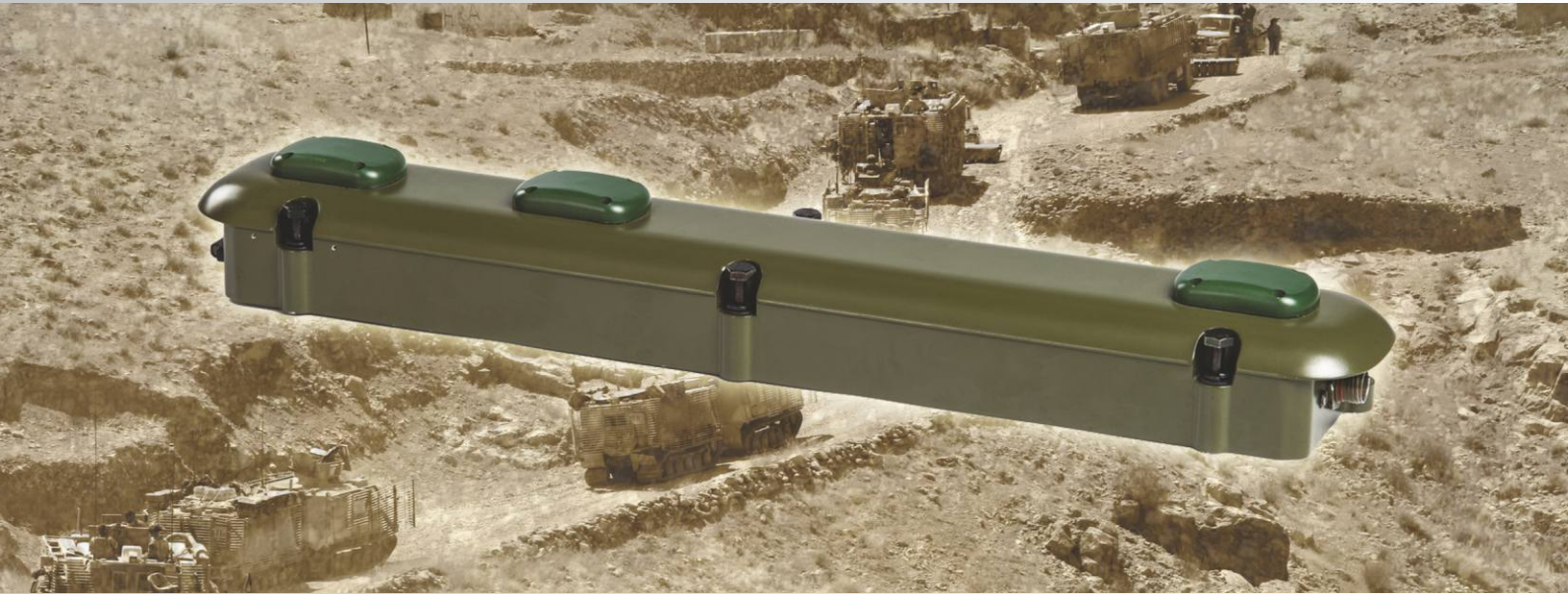


GNAV

GPS Based Northfinding and Navigation Module with Integral Backup Inertial Measurement Unit



Main Advantages & Features

- Self contained orientation module
- Provides North orientation when stationary
- Provides position, pitch and roll
- Not sensitive to magnetic environment
- Orientation backup by built-in inertial measurement unit
- Designed for ease of installation
- Operates from locally derived vehicle power supply
- Rugged machined aluminium casing
- Environmentally sealed (IP67)
- RS422 communications
- Ideal for OEM or retrofit applications

Instro's GNAV is a GPS based north finding, position and attitude determination module designed for effective use in ferro magnetic environments such as heavy vehicles and ships where electronic compass based solutions are not viable and where inertial systems are too costly.

Due to GNAV's unique design concept, accurate direction can be determined while stationary, along with position and attitude.

GNAV modules are packaged in a heavy duty, thick wall aluminum housing providing a high degree of mechanical protection.

The GNAV's integrated 3 axis IMU provides azimuth data continuity during short periods of GPS reception loss as well as an increased data output rate over its RS422/RS232 data link.

The design and ease of installation and use of the GNAV module makes it ideally suited to vehicle retrofit applications.

GPS Based Northfinding and Navigation Module with Integral Backup Inertial Measurement Unit

Outline Specification

Weight (approx)	12kg (26.4lbs)
Overall size (approx)	780mm L x 140mm W x 90mm H
Mechanical interface	Series of mounting holes for captive bolts plus locating dowels
Power requirements	Input Voltage: 18 to 32 Vdc. Power Consumption: 25W typical
Azimuth Accuracy:	0.5° 1 σ - pitch and roll to within $\pm 15^\circ$ or 2° - RMS - pitch and roll to within $\pm 15^\circ$ with GPS reception degraded - IMU only
Pitch Accuracy:	0.5° 1 σ - Pitch to within $\pm 15^\circ$
Roll Accuracy:	0.5° 1 σ - Roll to within $\pm 15^\circ$
Position Accuracy:	5m CEP (GPS) 1.5m CEP (DGPS)
Inertial Measurement Unit (IMU)	Yes
Acquisition Time	Time to First Fix (TTFF) < 150 sec hot start
Environmentally sealed	Yes (IP67)
Communication interface	RS422/RS232
Operating temperature	-35° C to +55° C

Applications

- Armoured vehicles
- Radars & surveillance platforms
- Mobile mounted weapons platforms
- Artillery platforms & missile launchers
- Mobile mounted weapons platforms
- Ships and maritime applications

Options

- Vehicle specific mounting brackets
- Customised mechanical interfacing
- Electrical interface and conductivity
- Vehicle specific cabling and power supply interfacing
- Enclosure colour

Accessories

- Starter kit for developers, including cables and software (Windows)



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