



HRG Crystal™

## GEONYX™ M

**GNSS-denied Attitude and Heading Reference System (AHRS) / Inertial Navigation System (INS) for both Amphibious and Speed boats vehicles**

*Geonyx™ M provides attitudes and heading for systems such as guns, rocket launchers, radars & observation sights intended to be used on both amphibious vehicles and speed boats, with or without GNSS.*

### **Robustness and reliability**

Easily integrated into any type of vehicle or ship, including amphibious as primary AHRS/INS\* system, Geonyx™ M is specifically designed to withstand stringent environmental conditions such as vibrations, shocks, climate and radio-environment. Thanks to the embedded HRG Crystal™, Geonyx™ M is the most reliable INS on the market.

### **Operational efficiency**

Stand-alone, resilient, compact and robust, Geonyx™ M provides without any link to external sensor (such as a vehicle motion sensor and/or Loch sensor):

- 1 mils pointing accuracy at high latitude
- Short alignment time
- Position capability (INS) for land and naval platforms



## Technical specifications

### Optimized architecture

- Size : 205/245 x 158 x 169 mm
- Weight : 6.4 kg
- Consumption : < 17W
- Hard-mounted (no external mount needed)
- Immune to magnetic stress & high vibrations/shocks
- Gyro technology : HRG Crystal™

### Maintenance

- MTBF (mean time between failure) : 200,000 hours in naval applications

### Flexible Interfaces

- GNSS embedded (external GNSS possible)
- RS422
- Ethernet
- CANBUS

### Navigation standards

- Environment : MIL-STD-810
- Electrical : MIL-STD-1275
- EMC : MIL-STD-461

### FITTED FOR

Amphibious vehicle  
 Military/Paramilitary ship  
 Guns  
 Radar  
 Rocket launcher  
 Observation sight  
 Speed boat  
 Airboat

### European in-house technology

### Subject to French export control authorization

### ITAR Free

### Performances

	GEONYX™ M		
	Naval AHRS	Naval platform	Land platform
Sea heading / Land azimuth (RMS*) at 65° lat.	0.05°	0.05°	1 mils (⇔ 0.42 mils seclat)
Pitch & Roll (RMS)	0.03°	0.03°	0.5 mils
Position	N/A	1Nm/1h (TDRMS*)	0.1% DT (CEP*)
Static Alignment time**	Depending on platform	< 15 min	< 5 min
On the move Alignment time**	Depending on platform	< 30 min	< 10 min

\*AHRS: Attitude and Heading Reference System / INS: Inertial Navigation System / GNSS: Global Navigation Satellite System / HRG: Hemispherical Resonator Gyroscope / RMS: Root Mean Square / CEP: Circular Error Probable / TDRMS: Time Distance Root Mean Square

\*\* Time to full performance

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