

*Reliable navigator  
for cross country and  
urban operations*

## **LLN-GY** Hybrid Land Navigator



Northrop Grumman LITEF (NG LITEF) has 50 years of experience in Inertial Systems Technology and was the first company in the world to introduce Fiber Optic Gyroscopes (FOG) in commercial aviation systems in the 1990s. NG LITEF established its line of land navigation systems, triggered by contracts from the German Army. NG LITEF LAND NAVIGATORS are based on FOG technology combined with high accuracy MEMS accelerometers, developed and produced in Germany.

The LLN-GY is a dead reckoning navigator which receives automatic position updates from GPS when available. Based on one FOG and two accelerometers, its intelligent design provides a navigation performance matching navigators with more expensive sensor suites and outperforming solutions based on a Magnetic Compass in accuracy and reliability.

Originally designed for the environmental conditions of the Leopard2 MBT, the LLN-GY today is in use on all kinds of military vehicles, both wheeled and tracked, for which reliable positioning and heading are pre-requisites for their mobility, situational awareness and on-board command-and-control (C2) systems.

### **Main Features**

- Hybrid and autonomous navigation
- Continuous position and heading data
- Automatic operation
- Alignment on the move
- Fully operational immediately after power-on
- Supports amphibious operation
- Jamming robustness
- RS-422, CAN-BUS and Ethernet interfaces
- NMEA output for GPS look-alike
- Low power consumption
- No scheduled maintenance
- Designed for 20+ year life time
- Fourth generation, over 15 years in service
- German technology

### **Typical Applications**

- Waypoint navigation
- Heading reference for Laser Range Finder
- Attitude data for Far Target Location
- Reliable C2 position updates independent of GPS

# LLN-GY

## Hybrid Land Navigator

### TECHNICAL DATA

<b>Performance</b> (all values PE50/CEP50)	
• Heading	≤ 0.27 °
• Position	
- INS/VMS/GPS	≤ 8 m (typ. <sup>*)</sup> : < 5 m)
- INS/VMS	≤ 0.8 % DT (typ. <sup>*)</sup> : < 0.3% DT)
• Altitude	≤ 10 m
• Attitude (Pitch / Roll), static	≤ 0.34 ° (typ. <sup>*)</sup> : < 0.17 °)
<b>Physical</b>	
• Weight	< 2.8 kg
• Dimensions L x W x H	187 x 178 x 109 mm <sup>3</sup>
• Power Consumption	< 12 W
• Power Supply	18 – 32 VDC (MIL-STD-1275B)
<b>Environmental</b>	
• Operating temperature	-40 °C to +71 °C
• Vibration, Shock	MIL-STD-810F
• EMC	MIL-STD-461E
<b>Logistics</b>	
• Built in Test	Power up BIT Continuous BIT
• Compatible GPS receivers	GPS-ICD 153, NMEA-0183
<b>Optional Equipment</b>	
• GPS receivers	
• Odometers	
• Displays	
• Test equipment	

<sup>\*)</sup>Typical values: measured at final production acceptance tests

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March 2012