



# LN-351 (EGI-M)

## Embedded Global Positioning System (GPS) / Inertial Navigation System (INS) Modernization

Northrop Grumman's LN-351 is designed to offer maximum flexibility, addressing both challenging military requirements and civil interoperability capabilities, including DO-178C and DO-254 compliance. It ensures exceptional Positioning Navigation and Timing (PNT) reliability and unprecedented performance, covering navigation, pointing, stabilization and flight control applications.

Also referred to as the Embedded Global Positioning System (GPS) / Inertial Navigation System (INS) Modernization (EGI-M), the LN-351 incorporates an advanced navigation system utilizing fiber optics and Military-code (M-code), a robust, encrypted GPS signal tailored for military use, providing superior resistance to jamming and spoofing. This modern design enhances functionality in GPS-contested and denied environments, demonstrating resilience, and equipping platforms with reliable and precise navigation capabilities.

### DESCRIPTION AND ADVANTAGES

The LN-351 is a fully integrated, digital INS/GPS, non-dithered navigation system with an embedded 24-channel, All-In-View, Military Global Positioning System (GPS) User Equipment (MGUE), capable of tracking M-code, P(Y) code or coarse/acquisition (C/A) Code. Building off the heritage of the LN-251, the LN-351 has a fully integrated, tightly coupled GPS inertial design that provides superior navigation performance relative to other embedded INS/GPS units. The non-dithered inertial sensor achieves the lowest measurement error for both gyro and accel in its class for increased sensor accuracy. Its modular, open system architecture provides an ecosystem for easy adaptation to other applications and evolving requirements.

The LN-351 Fiber-Optic Gyro (FOG) employs one of our most modern technologies and includes four independent navigation solutions: blended INS/GPS, INS-only, GPS-only

and Blended Navigation Assurance (BNA). The non-dithered, low noise FOG technology eliminates self-induced acceleration and decreases velocity noise as observed in Ring Laser Gyro technologies. Our LN-351 has independent and programmable outputs for flight controls, avionics and is available in discrete performance categories from 0.4 to 2.0 nmi/h (free inertial) performance.

### APPLICATIONS

The LN-351 provides exceptional performance for navigation, geo-location of sensor targeting, and transfer align of remote sensors. With the lowest Angle Random Walk (ARW) in its performance class, the LN-351 achieves unequalled stabilization performance for use in SAR (Synthetic Aperture Radar), AESA (Actively Electronically Scanned Array) Radar and EO/IR (Electro-Optical Infrared) applications, as well as highly accurate target location. The system supports a wide variety of shipboard and undersea applications and is capable of AR-57 shipboard alignment.

### INTERFACE OPTIONS

The LN-351 is equipped with RS-422, ARINC-429, MIL STD 1553B, and Ethernet (10/100/1000T) interfaces. Additionally, future growth of the LN-351 will support Fiber-Optic, high-speed SerDes (serializer/deserializer) interfaces.

### GROWTH

The LN-351 offers seamless integration capability and third-party application hosting. It features anti-jam GPS subsystems, beam-steering and nulling capabilities as well as growth provisions to apply Differential GPS (DGPS) corrections from various commercial formats, improving GPS accuracy.

### FOR MORE INFORMATION, PLEASE CONTACT:

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