



## **FIN 3110 INERTIAL NAVIGATION SYSTEM**

**FIN 3110 is a robust, unjammable ring Inertial Navigation System (INS) system based on strap down Ring Laser Gyro (RLG) technology. It provides a hybrid navigation solution combining data from other sources of navigation data and ZUPTS in a Kalman filter to provide a continuous and accurate navigation solution.**

An embedded 12 channel P(Y) code GPS receiver with built in antenna is offered as standard for approved users. An optional C/A code version is also available.

The capability to withstand high levels of gunfire shock has been designed into the equipment. This has been demonstrated at levels in excess of 300g peak.

The 3 axis, all attitude inertial system provides outputs of vehicle position, velocity, heading, elevation, roll and height. The INS is normally aided by a global positioning system and vehicle odometer to provide a continuous and accurate position solution. When GPS is jammed or not available accurate position and velocity is still provided.

FIN 3110 represents a low risk solution for precision navigation and pointing and has undergone the most demanding of test regimes by the British Army and has gained acceptance as the preferred navigation systems on all British artillery platforms.

### **KEY BENEFITS**

- State-of-the-art RLG based technology proven to provide accurate navigation and orientation data
- Powerful Kalman filter to blend GPS, odometer and zero velocity data to provide a continuous and accurate position solution
- Proven interface with PLGR II, and various embedded military and commercial GPS receivers
- Rugged anti-vibration mounted inertial sensor proven to withstand gunfire shock and vibration
- Sealed unit proven in harsh desert and arctic environments
- Accurate back-up navigation when GPS is not available
- Demonstrated reliability in excess of 8000 hours in tracked and wheeled vehicles
- In service with British and foreign armed forces.

## FIN 3110 Inertial Navigation System



The FIN3110 Inertial Navigation System is robust, unjammable and versatile

### TECHNICAL SPECIFICATIONS

#### Horizontal Position

INS/GPS	< 10m CEP
INS/Odometer	<25m CEP or 0.25% of DT (which ever is the larger)

#### Vertical Position

INS/GPS	<10m CEP
INS/ Odometer	<0.15% of DT CEP

#### Heading/ Pointing

	1 mil PE
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#### Roll and Elevation

	0.6 mil PE
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#### Features

Strapdown Instrument Sensor Assembly (ISA)
24cm path length, type 164 laser gyros
Q flex accelerometers

#### Physical

Size	195mm W; 216 mm H (inc GPS module); 290 mm L
Weight	12Kg
Operating Temperature	-40 °C to +55 °C with intermittent operation to +71 °

#### Power

	24V DC, 40W, operating range 16-32V
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#### MTBF

	>8000 hours
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#### Interface

	2 x RS-422 full duplex serial interfaces
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Inertial Sensor Assembly (ISA)



Ring Laser Gyroscope (RLG)

For more information please email [sales.marketing@selexgalileo.com](mailto:sales.marketing@selexgalileo.com)

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