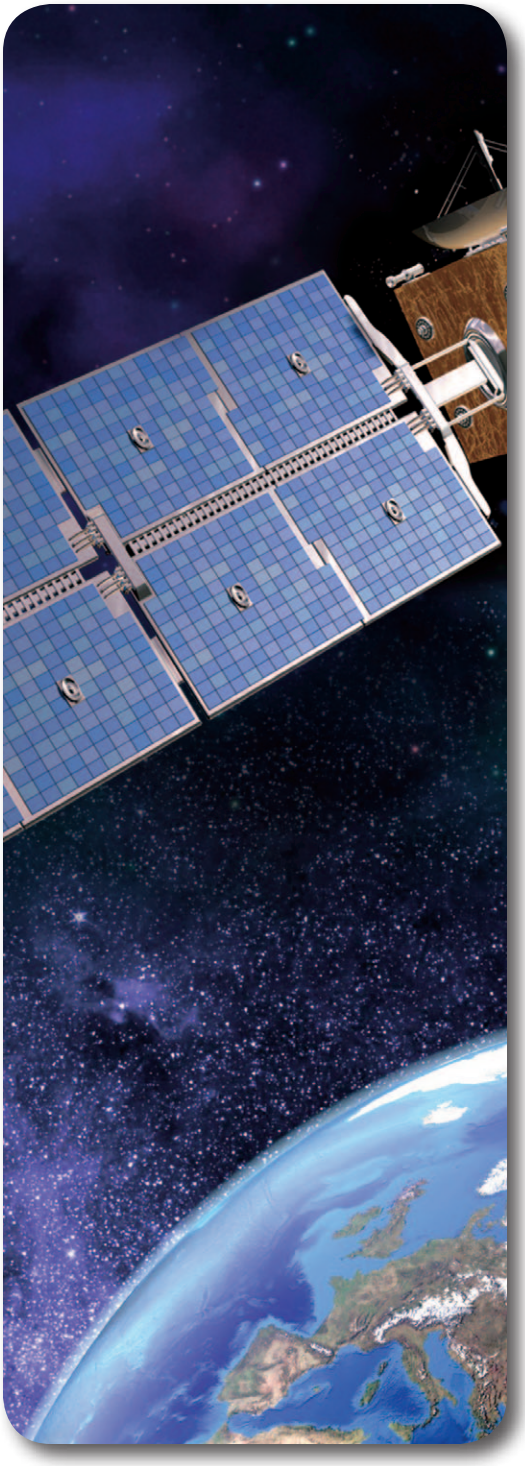
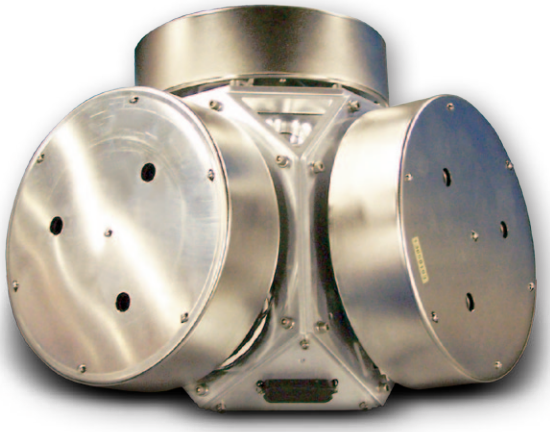
HIGH-PERFORMANCE FOG IMU

Strategic-Grade, Fiber Optic Gyro (FOG) Inertial Measure Unit (IMU)





L-3 Space & Navigation (L-3 S&N), located in Budd Lake, NJ has been designing, developing and producing inertial components and navigation systems for Space applications for over 45 years. We have been developing Fiber Optic Gyros (FOGs) since their introduction in the early 1980s. We have produced and delivered many FOG based products with strategic-grade performance for a variety of applications.

L-3 Space and Navigation has leveraged our long legacy of designing and fabricating fiber optic gyros for space applications to develop our new, High-Performance FOG IMU. The High-Performance FOG IMU is a state-of-the-art, strategic-grade, inertial measure unit for inertial navigation, guidance, pointing and stabilization of missile, space, sensor, ground, air and marine applications.

The High-Performance FOG IMU design simplifies the optical circuit design, reducing the number of components while providing a significant performance improvement over standard military environments.

APPLICATIONS:

The system is uniquely qualified for:

- Platform stabilization,
- Pointing applications
- Missile guidance systems
- Vehicle/platform navigation
- Northfinder applications

Specifications
CIRUS-A Strategic Grade Inertial Measurement Unit

PERFORMANCE

GYRO PERFORMANCE

Bias Stability (1σ)	0.0001 °/hr.
Angle Random Walk (EOL)	0.0005 °/√hr.
Scale Factor Stability	± 2 ppm
Scale Factor Linearity	10 ppm
Angular Rate Range	> 45 °/sec
Acceleration Range	± 8 °/sec²

ACCELEROMETER PERFORMANCE

Range (g's)	60 g
Bias (milli g's)	2 µg
Scale Factor Stability	300 ppm

SYSTEM PERFORMANCE

Bandwidth	> 500 Hz
Operating Life	10 yrs.(1,400 hr. operational/yr.)

CHARACTERISTICS

Interface	Custom serial Interface

PHYSICAL

Weight	18 lb., 8.165 kg
Dimensions	11.9 in. L x 11.1 in. W x 5.9 in. H 30.23 cm L x 28.2 cm W x 15 cm H
Power	10 W @ 28 VDC

ENVIRONMENTAL

Temperature Range	
Operational	-40 °C to 40 °C
Non-Operational	-40 °C to 40 °C
Random Vibration	0.1 grm
Humidity	95% @ 40 °C for 6 hr.

The CIRUS-A IMU's performance enhances all EO/IR platforms ability to identify and defeat threats from the air and on the ground.

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