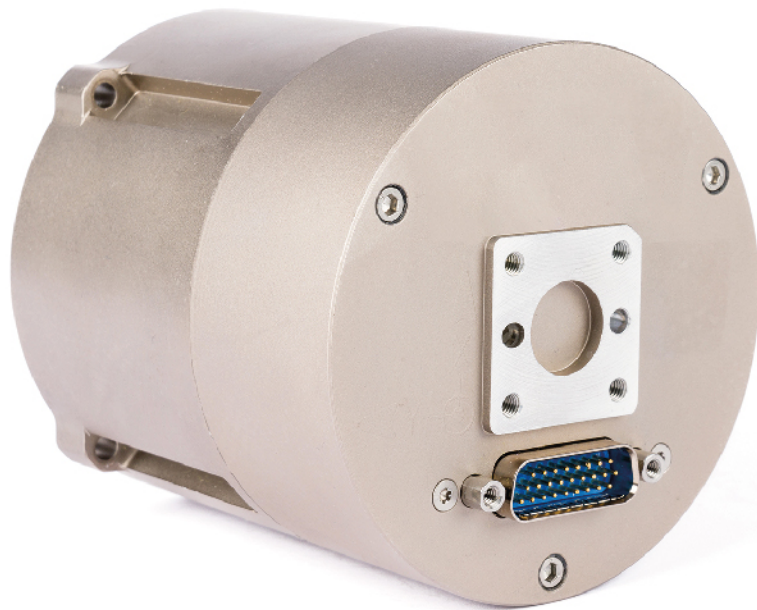


# CFI-200

SWaP-C FOG Family of IMU



## IMU

FOR ADVANCED STABILIZATION  
AND NAVIGATION APPLICATIONS

# FIBER OPTIC GYRO INERTIAL MEASUREMENT UNIT

The **CFI-200** is ITAR FREE and optimized SWaP-C (Size, Weight and Power-Cost) strap down Inertial Measurement Unit (IMU) with state-of-the-art closed loop Fiber Optic Gyroscope and MEMS accelerometers. It provides body inertial linear accelerations and incremental angles and velocities for advanced stabilization and navigation together with information status of the internal sensors and electronics.

## APPLICATIONS:

- High bandwidth (>1kHz) sensors EO/IR stabilization
- GNC (Guidance Navigation Control) for space launchers
- Flight Control
- INS or AHRS

## SYSTEM CHARACTERISTICS

### Gyroscopes

Type: *Closed-loop FOG*

Bias Accuracy: < 0.85 - 0.25 °/hr (1 $\sigma$ )

Angular Random Walk (ARW): < 0.018 to 0.008 °/√hr

Scale Factor Accuracy: < 50 to 100 ppm (1 $\sigma$ )

Scale Factor Linearity: < 25 to 50 ppm (1 $\sigma$ )

Maximum rate: ± 900 - 1900 °/sec

Bandwidth (-3db): up to 1500 Hz

Gyro Vibration Rectification Error: < 0.04 °/hr/gRMS<sup>2</sup>

### Interfaces

RS422 digital I/O

SDLC / UART

Data output rate: to 3.6 kHz

### Environmental

Operating temperature: -55°C < T < 71°C

EMI/Vibration/Shock: DO-160G/MIL-STD-810G

### Accelerometers

Type: MEMS

Bias accuracy: 0.15 to 1 mg

Full Scale Performance Range: ±40 / 60 / 80g

Bandwidth: up to 1500 Hz

Scale Factor Accuracy: < 50 to 300 ppm (1 $\sigma$ )

Scale Factor Linearity: < 25 to 100 ppm (1 $\sigma$ )

Velocity Random Walk (VRW): < 0.04 m/sec/√hr

Acc Vibration Rectification Error: < 15 μg/gRMS<sup>2</sup>

### Size

φ ≤ 88.9 mm (95.25 mm considering fixing points)

h ≤ 93.5 mm (98.5 mm with the connector interface)

### Weight

< 850 g

### Power supply

Consumption: 10 W

Supply Voltage: 5/15 VDC

10-35 VDC

