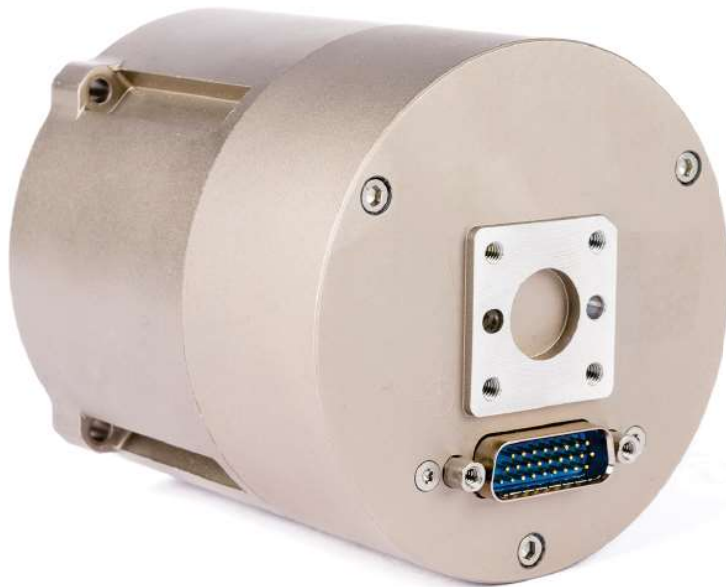


CFI-200

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 (up to 1.5kHz) sensors EO/IR stabilization
- GNC (Guidance Navigation Control) for space launchers
- Flight Control
- INS or AHRS

GYROSCOPES

Type	Closed-loop FOG
Bias Accuracy	$< 0.85 - 0.25 \text{ }^\circ/\text{hr}$ (1σ)
Angular Random Walk (ARW)	$< 0.018 \text{ to } 0.008 \text{ }^\circ/\sqrt{\text{hr}}$
Scale Factor Accuracy	$< 50 \text{ to } 100 \text{ ppm}$ (1σ)
Scale Factor Linearity	$< 25 \text{ to } 50 \text{ ppm}$ (1σ)
Maximum rate	$\pm 900 - 1900 \text{ }^\circ/\text{sec}$
Bandwidth (-3db)	up to 1500 Hz
Bandwidth (-3db)	$< 0.04 \text{ }^\circ/\text{hr/gRMS}^2$

ACCELEROMETERS

Type	MEMS
Bias Accuracy	0.15 to 1 mg
Full Scale Performance Range	$\pm 40 / 60 / 80g$
Bandwidth	up to 1500 Hz
Scale Factor Accuracy	$< 50 \text{ to } 300 \text{ ppm}$ (1σ)
Scale Factor Linearity	$< 25 \text{ to } 100 \text{ ppm}$ (1σ)
Velocity Random Walk (VRW)	$< 0.04 \text{ m/sec}/\sqrt{\text{hr}}$
Acc Vibration Rectification Error	$< 0.04 \text{ }^\circ/\text{hr/gRMS}^2$

SYSTEM CHARACTERISTICS

Interfaces

RS422 digital I/O
SDLC / UART
Data output rate: to 3.6 kHz

Environmental

Operating temperature: $-55^\circ\text{C} < T < 71^\circ\text{C}$
EMI/Vibration/Shock: DO-160G/MIL-STD-810G

Size

$\phi \leq 88.9 \text{ mm}$ (95.25 mm considering fixing points)
 $h \leq 93.5 \text{ mm}$ (98.5 mm with the connector interface)

Weight

$< 850 \text{ g}$

Power supply

Consumption: 10 W
Supply Voltage: 5/15 VDC
10-35 VDC

