

**CALTROP INSTRUMENTS**  
A BRIDGE TO PERCEIVE THE WORLD



**Product Description:**

This product is built-in high-precision three-axis integrated fiber-optic gyro and high-precision quartz flexure accelerometer, which can realize high-precision heading, attitude, speed and position measurement of moving carriers.

This inertial guidance system can well meet the needs of long time, high precision and high reliability navigation applications in complex environments such as urban canyons, and can be used for the navigation and control of all kinds of unmanned systems.

**Features:**

- Fast and accurate determination of initial heading and attitude
- Real-time heading and attitude output
- Supports dynamic fast alignment
- Enhanced Kalman filtering algorithm
- Anti-electromagnetic interference and vibration
- Internal vibration damping

**Applications:**

- Car Navigation
- Airborne Navigation
- Shipboard Navigation
- Stabilization Control

**Specification:**

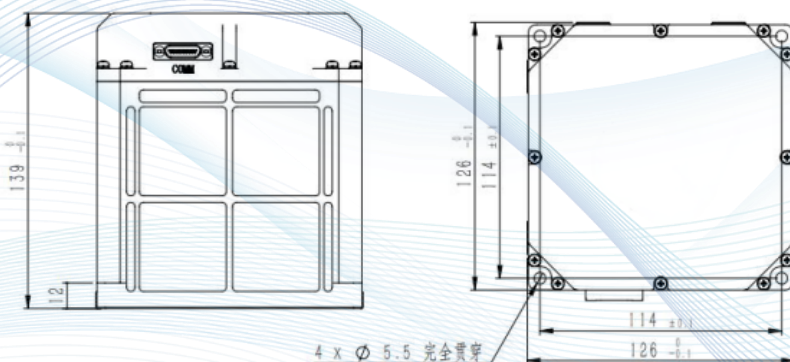
**Pure inertial navigation accuracy**

Attitude Accuracy	Azimuth alignment accuracy: $\leq 0.1^\circ \text{sec} (\Phi)$ ( $1\sigma$ , $\Phi$ is local latitude) Horizontal attitude alignment accuracy: $\leq 0.006^\circ$ ( $1\sigma$ ) Azimuth holding accuracy: $0.02^\circ/\text{h}$ ( $1\sigma$ ) Horizontal attitude hold accuracy: $0.02^\circ/\text{h}$ ( $1\sigma$ )
Position Accuracy	Position Accuracy: $\leq 1\text{mile}/\text{h}$ (50%CEP)
Velocity Accuracy	Horizontal velocity accuracy: $\leq 0.5\text{m}/\text{s}$ ( $1\sigma$ )

## Specification:

Main Device Characteristic						
Gyroscopes	Range	±500°/s		Accelerometers	Range	≥ ±30  g
	Zero bias stability	≤0.02°/h (1σ)			Zero bias stability (normal)	≤20 μg (1σ)
Physical Characteristic			接口特性			
Supply voltage	24V DC rate (12 ~ 32V DC)		Interface method	RS232/RS422/Support PPS, EVENTMARK input/output		
Electric consumption	< 25W			Transmission speed	9600 ~ 230400bps (configure)	
Operating temperature	-40°C~+55°C		User mode		Vehicle-mounted (default), aircraft-mounted, ship-mounted	
Protection level	IP65					
Physical dimension	≤126mm×126mm×139mm					
Weight	≤2.3Kg					

## Dimensions:



The data contained in this document is intended for the use of technical trainers only.

The customer's technical department is responsible for assessing the suitability of the product for the intended application and the completeness of the product information given in this document in relation to such application.

For further information on products, technology, terms and conditions of delivery and prices, please contact our nearest office ([www.senstechxyz.com](http://www.senstechxyz.com)).

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