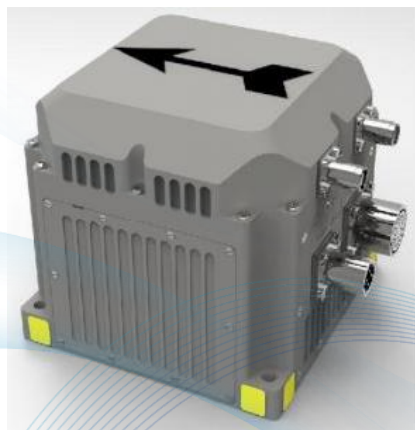


CALTROP INSTRUMENTS
A BRIDGE TO PERCEIVE THE WORLD

Product Description:

This product has a built-in three-axis integrated high-precision fiber optic gyro, high-precision quartz flexure accelerometer and a mobile mapping grade multi-mode and multi-frequency GNSS receiver that supports the autonomous BeiDou function. Through advanced intelligent combination navigation algorithm and Kalman filtering, optimized design for GNSS obstruction and multi-path interference, it can realize high-precision heading, attitude, speed and position measurement of the mobile carrier.

The inertial guidance system also has a variety of sensor interfaces, such as GNSS/odometer/DVL/barometric altimeter, etc., which can well meet the requirements 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
- Support real-time heading and attitude output
- Built-in GPS, BeiDou dual-mode receiver
- Dynamic fast alignment
- INS/GNSS combination design
- Support IE post-processing
- Anti-electromagnetic interference and vibration
- Enhanced Kalman filtering algorithm

Applications:

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

Specification:

Combined inertial/satellite navigation accuracy	
Attitude Accuracy	Direction $\leq 0.05^\circ$ (1σ) ; Roll、Pitch: $\leq 0.01^\circ$ (1σ)
Position Accuracy	Point position: $\leq 2\text{m}$ (50%CEP) ; RTK: $\leq 1\text{cm} + 1\text{ppm}$ (50%CEP)
Velocity Accuracy	$\leq 0.1\text{m/s}$ (1σ)
Registration Time	Starting from the acquisition of latitude/longitude position information, the duration of the alignment process is $\leq 5\text{min}$.
Inertia/ODO/DVL Accuracy	$0.5\% \times \text{Miles traveled}$ (Depends on ODO or DVL accuracy)

Specification:

Pure inertial navigation accuracy			
Attitude Accuracy	Alignment accuracy: $\leq 0.2^\circ \text{sec} (\Phi)$ (1σ , Φ = local latitude);		
	Horizontal Attitude Alignment Accuracy: $\leq 0.01^\circ$ (1σ);		
	Azimuth Holding Accuracy: 0.05° (10min) (1σ);		
	Horizontal Attitude Holding Accuracy: 0.05° (10min) (1σ).		
Position Accuracy	Position Accuracy: $\leq 1 \text{nmile}$ (10min) (50%CEP)		
Velocity Accuracy	Horizontal velocity accuracy: $\leq 2.6 \text{m/s}$ (10min) (1σ).		
Main Device Characteristic			
Gyroscopes	Range $\pm 300^\circ/\text{s}$	Zero bias stability	$\leq 0.05^\circ/\text{h}$ (1σ)
Accelerometers	Range $\pm 10\text{g}$	Zero bias stability	$\leq 20\mu\text{g}$ (1σ)
Physical Characteristic		Interface Characteristic	
Supply voltage	24V DC rate (12 ~ 32V DC)	Interface method	4 serial ports (RS232 or RS422)
Electric consumption	< 30W		Support PPS, EVENTMARK input/output
Operating temperature	$-40^\circ\text{C} \sim +65^\circ\text{C}$	Transmission speed	9600 ~ 230400bps (configure)
Protection level	IP65	User mode	
Physical dimension	$\leq 136\text{mm} \times 136\text{mm} \times 130\text{mm}$		
Weight	$\leq 4.2\text{Kg}$		
Vehicle-mounted (default), aircraft-mounted, ship-mounted			

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).

中国大陆
 西安鑫源宇通电子科技有限公司
 陕西省西安市高新区锦业路70号航天恒星园区1号厂房一层南
 Tel: 400-780-9688
sales@senstechxyz.com

中国香港
 深大实业有限公司
 香港新界沙田安平街6号新贸易中心B座13楼06室
 Tel: +86 17792099916
info@caltropinstruments.com

新加坡
 深大实业有限公司
 香港新界沙田安平街6号新贸易中心B座13楼06室
 Tel: +86 17792099919
info@senstechxyz.com



西安鑫源宇通电子科技有限公司 | 400-780-9688
 鑫源宇通——专业的传感和系统解决方案供应商

www.senstechxyz.com