

# INS570

## Fiber Optic Inertial Navigation System

INS570 offers real-time data such as heading, attitude, speed/velocity, position, angular rate, and acceleration, it ensures seamless navigation in diverse environments. With a compact design, low power consumption, and support for external sensors (e.g., odometers, DVL, USBL), INS570 is ideal for vehicle navigation, marine navigation, aerospace, UAVs, and engineering surveying. Its multi-mode navigation and centimeter-level positioning precision make it a versatile solution for demanding applications.



### System Specifications

North-seeking Accuracy	$\leq 0.3^{\circ}\text{sec}\phi$	
Heading Accuracy	0.05° (RMS, single antenna dynamic alignment)	
	$\leq 0.1^{\circ}$ (RMS, dual antenna 2m baseline)	
Attitude Accuracy	$\leq 0.02^{\circ}$ (RMS)	
Position Accuracy	Pure inertial navigation	1.5nm/30min, 5nm/h (CEP50)
	Satellite combination	$\leq 1.2\text{m}$ (single point positioning, RMS)
	DVL combination	1%D (D is the mileage)
	Odometer combination	0.3%D (D is the mileage)
Velocity Accuracy	$\leq 0.02\text{m/s}$ (satellite combination, RMS)	
Startup Time	$\leq 5\text{s}$	
Align Time	$\leq 1\text{-}2\text{min}$ (dual antenna satellite assist)	
Data Update Rate	0.1Hz-100Hz	

### Device Specifications

		Bias Stability
Gyro	Input Range $\pm 1000^{\circ}/\text{s}$	INS570: $\leq 0.1^{\circ}/\text{h}$ (1 $\sigma$ , 10s@room temperature)
Accelerometer	Input Range $\pm 30\text{g}$	$\leq 50\mu\text{g}$ (1 $\sigma$ , 10s@ room temperature)

### Physical Properties

Power Supply	18-36V (DC)	Power Consumption	$\leq 12\text{W}$
Operating Temperature	-40°C ~ 65°C	Material	Aluminium
Storage Temperature	-50°C ~ 80°C	Weight	$\leq 850\text{g}$
Dimensions	80x80x84 (mm)		
Shock、Vibration Meet the requirements of GJB150.16A-2009、GJB150.18A-2009			

### Interface Characteristics

Form	3xRS232, 1xRS422, 1xPPS, 1xCAN, 1xRJ45
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