

# IMU930-2A

## FOG & MEMS IMU



This hybrid inertial measurement measurement (IMU) consists of a 3-axis gyroscope (i-FOG for the Z axis, MEMS gyroscope for the X and Y axes) and an accelerometer to detect angular velocity and acceleration, and then calculate the attitude angle (roll angle, pitch angle) and azimuth angle. It is used to measure the behavior, attitude and orientation of various moving objects, and is widely used in the field of automatic driving.

### ADVANTAGES

- The combination of optical fiber and MEMS makes up for the azimuth accuracy and generates new value
- Fills the new concept of low cost and high precision
- Professional parameter and quadrature error calibration technology

### APPLICATION FIELDS

- Navigation and positioning of self-driving vehicles;
- Unmanned mining trucks, automatic driving of port logistics;
- High-speed railway field;

### IMU930-2A TECHNICAL PARAMETERs

IMU	Parameter		X	Y	Z	
	Gyros	type		MEMS	MEMS	FOG
Range			±300°/s	±300°/s	±300°/s	
Zero bias at full temperature			≤ 1°/h	≤ 1°/h	≤ 0.1°/h	
Angular random walk			≤ 0.007°/s	≤ 0.007°/s	≤ 0.05°/√h	
bias instability			≤ 1°/h	≤ 1°/h	≤ 0.05°/h	
Bias stability (1σ)			≤ 5°/h	≤ 5°/h	≤ 0.08°/h	
Zero bias repeatability (1σ)			≤ 3°/h	≤ 3°/h	≤ 0.1°/h	
Scale Factor Nonlinearity			≤ 200ppm	≤ 200ppm	≤ 50ppm	
bandwidth			300Hz	300Hz	200Hz	
Accele-romete		type		MEMS	MEMS	MEMS
		Range		±6g	±6g	±6g
		Zero bias at full temperature		≤ 5mg	≤ 5mg	≤ 5mg
		Angular random walk		≤ 50mm/s/√h	≤ 50mm/s/√h	≤ 50mm/s/√h
		bias instability		≤ 100ug	≤ 100ug	≤ 100ug
	Bias stability (1σ)		≤ 200ug	≤ 200ug	≤ 200ug	
	Zero bias repeatability (1σ)		≤ 200ug	≤ 200ug	≤ 200ug	
	Scale Factor Nonlinearity		≤ 100ppm	≤ 100ppm	≤ 100ppm	
bandwidth		300Hz	300Hz	300Hz		
Environmental requirements	Operating temperature (°C)			-40 ~ +85		
	Storage temperature (°C)			-55 ~ +100		
	shell material			Aluminum		
Physical properties	Size			60x60x40 (mm)		
	Weight			≤0.2Kg		