

# ER-AHRS-10 FOG Strapdown Attitude Heading Reference System

## Introduction

The FOG Strapdown Attitude Heading Reference System consists of a closed-loop fiber optic gyroscope (ER-AHRS-10M uses an ultra-small closed-loop fiber optic gyroscope) and a quartz flexible accelerometer as the core inertial component, which is aligned or initially self-aligned by external input heading. In the post-flight, the coordinated attitude system is realized by satellite signal combination correction. The product can work in pure inertial attitude state or satellite signal combined attitude state, and simultaneously output three-axis high-precision angular rate and linear acceleration signals (where ER-AHRS-10 is not combined). Flight status parameters such as aircraft attitude, heading, position, speed, acceleration, and angular velocity can be provided for cockpit display, aircraft control, radar antenna platform, and other systems. The product has the characteristics of small size, light weight and high reliability.

## Application

camera equipment

seekers

transport aircraft

drones

helicopters

small and medium-sized general aircraft

## Specifications

Project	ER-AHRS-10	ER-AHRS-10K	ER-AHRS-10M
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Dimensions	370mm*124mm*195mm	228mm*125mm*80mm	208mm*105mm*70mm	
Weight	≤8kg	≤3kg	≤2.2kg	
Power supply	24V±4VDC(18V-36V)Power consumption<30W	28VDC(18V-36V)Power consumption<35W	28VDC(18V-36V)Power consumption<30W	
Output Interface	RS-422/RS-232			
Preparation time	≤5min			
Inertial/GNSS/BDII c ombined attitude acc uracy heading	Heading	0.05°(RMS)		
	Attitude	0.05° (RMS)		
Pure inertial attitude accuracy (60min)	Heading	0.2°(RMS)	0.3°(RMS)	0.5°(RMS)
	Attitude	0.1°(RMS)	0.1°(RMS)	0.1°(RMS)
Measuring range	Angular velocity	±400°/s		
	Acceleration	±20g		
Conditions of Use	Operating temperature	-40°C-+70°C		
	Shock	Half sine wave/40g, 11ms		
	Vibration	0.02g <sup>2</sup> /Hz		
Reliability	10000h			