

BP-I SURVEYING AND MAPPING FIBER-OPTIC INERTIAL NAVIGATION SYSTEM



Product introduction

BP-I(SAM001) is equipped with medium and high precision fiber optic gyroscope, quartz accelerometer and multi-mode satellite navigation receiver. GNSS dual antenna real-time positioning and heading technology, autonomous seeking north technology, inertial navigation technology, integrated navigation technology, can output high-precision position, speed, heading, attitude, angular velocity, acceleration, time and other information.

Product features

Quickly north seeking

Precise time synchronization

Low latency

Application field

Autonomous navigation of various carriers; multi-beam hydrological measurement applications, ocean mapping.

Parameters

System accuracy	Heading accuracy	$\leq 0.08^\circ$ (The baseline length is 2m) (GNSS effective) $\leq 0.02^\circ$ (The baseline length is 2m) (Non real-time) $\leq 0.5^\circ$ (RMS, Since the north found)
	Attitude accuracy	$\leq 0.02^\circ$ (RMS, Static) $\leq 0.03^\circ$ (RMS, Dynamic)
	Positioning accuracy	1.5m~2m (1 σ) (SPS)
		0.5m~2m (1 σ) (DGPS)
		2cm+1ppm (Horizontal) (RTK) 2cm+1ppm (Vertical) (RTK)
	Speed accuracy	0.1m/s (GNSS effective)
	Heave	$\leq 5\text{cm}$ or 5%H (Whichever is bigger)
Performance data	Setting time	≤ 2 min
	Data update rate	100Hz (Configurable)
Interface features	Output interface	RS-232 / RS-422 (Configurable)
	Baud rate	4800 bauds~460800 bauds (Configurable)
Physical features	Input voltage	(DC) 12 ~ 32V、24V \pm 10% (Rated)
	Operation temperature	Main unit -20 $^\circ\text{C}$ ~+60 $^\circ\text{C}$ Antenna -40 $^\circ\text{C}$ ~+70 $^\circ\text{C}$
	Dimensions	160mm \times 160mm \times 153mm (X, Y, Z)
	Weight	≤ 4.1 kg

System composition: main unit, GNSS antenna, power supply box (optional), operation display unit (optional), interface box (optional).