

I3700: HIGH PERFORMANCE MEMS INS+GNSS SENSOR

■ PRODUCT DESCRIPTION

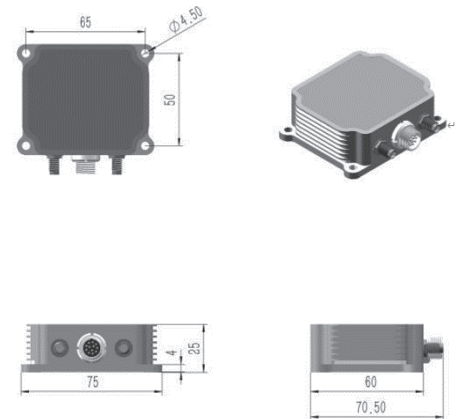


I3700 is a combined navigation system (GNSS/INS) that utilizes high-performance MEMS sensors, high-precision GNSS systems, and high-performance microprocessors. Equipped with a self-developed high reliability integrated navigation algorithm, it can output real-time information such as the speed, position, and attitude of the tested carrier. Users can also connect RTCM differential correction data externally to achieve high-precision RTK positioning. The IP68 waterproof shell packaging can be easily integrated into the user's system.

■ PRODUCT MAIN SPECIFICATION

Parameters		Unit	Indicators		
IMU+GNSS accuracy	Loss of lock time	s	3	10	60
	Position accuracy	cm	1	100	600
	Velocity accuracy	m/s	0.03	0.1	0.1
	Roll/Pitch accuracy	°	0.1	0.1	0.2
	Heading accuracy	°	0.2	0.2	0.35
Gyroscope	Range	° / s	±500		
	Resolution	° / s	0.001		
	Zero bias stability (Allan Curve, 1σ)	° / h	2.5		
	Random walk	°/√ hr	0.3		
	Bandwidth	Hz	120		
Accelerometer	Range	g	±6		
	Resolution	g	0.001		
	Zero bias stability (Allan Curve, 1σ)	ug	30		
	Random walk	m/s/√h	0.028		
	Bandwidth	Hz	150		
Data input/output	Data input	NMEA/RTCM/Novtel SPAN Binary Protocol			
	Data content	Speed, position, acceleration, angular velocity			
	Fusion algorithm	EKF			
	External sensor support	Odometer, GNSS, DTU etc			
Interface resource	COM1	Sensor data input and output interface, connected to user host			
	COM2	Differential data input interface output GPGGA			
	RS-422	Sensor data input and output interface, connected to user host			
	CAN1	Sensor data input and output, odometer data input			
	CAN2	Retain			
	PPS	Timing signal PPS duty cycle 50%			
	SYNC	Synchronous input and output pins			
	Hardware interface	12 pin aviation plug			
Mechanical properties	Size	mm	75 × 60 × 25		
	Weight	g	180		
	IP level	—	IP 68		
Electrical environment	Working temperature	°C	- 4 0 ~ + 8 5		
	Working voltage	V	6 ~ 3 6 DC		
	Power consumption	W	< 1.8		
	Certificate		CE, ROHS		

■ PRODUCT DIMENSION



■ PRODUCT APPLICATION

- Drone and UAV
- Robotics navigation
- ROV and unmanned ship
- Autonomous vehicles
- Unmanned agricultural machinery