

HI30 系列

High Performance Inertial Navigation System

The HI30 is a small, high-performance inertial navigation system, which can provide position and attitude in real time

Product Advantages

Hardware

- Industrial Redundant Sensor
- Smart Production System, Traceable Products
- Multiple Interfaces: UART(TTL)/CAN/SYNC
- -Operating Temperature: -40 to 85° C
- 0.2° Heading Dual Antenna RTK GNSS

Software

- EKF, Excellent Dynamic Performance
- 0.2° Heading Dual Antenna RTK GNSS
- In run bias stability 2.5° /h, 30ug

Certification

- RoHS, CE



The HI30 inertial navigation system integrates IMU and dual-antenna, multi-band, RTK-GNSS receiver. advanced INS algorithms provide you with accurate and powerful PVT information under signal loss

The HI30 can be used in UAV, automotive, unmanned agricultural machinery, unmanned ships and other industries



Agricultural Machinery



Unmanned

产品选型

HI32ab-c-d						
HI Company	30	Product Line	a Sensors	b TC	c Interface	d Customize
			R6 4XIMU+Mag+Bar+RTK-GNSS	N Without TC	MI0	000 default
			R7 4XIMU+Mag+Bar+Dual RTK-GNSS	T With TC		
e.g.:	HI30R7N-MI0-000		Mag: magnetometer	Bar: barometer		
	HI30R4N		need external GNSS system			

IMU	Accelerometer	Gyroscope	Magnetometer	Barometer
Range	±6g	±250° /s	±8Gauss	300 – 1200 hPa
Resolution	0.001g	0.001°	0.25mg	± 0.006 hPa (or ±5 cm)
Bandwidth	150Hz	120Hz	TBD	TBD
Bias Stability(Allan 25°C)	30ug	2.5°	TBD	TBD
Random walks	0.028m/s √ h	0.3° / √ h	TBD	TBD

Loss	3s	10s	60s
Position	1cm	1m	6m
Heading	0.2°	0.2°	0.35°
Pitch/Roll	0.1°	0.1°	0.2°
Velocity	0.03m/s	0.1m/s	0.1m/s

Note:odometer access

Parameters

GNSS

GNSS	1408 channel Dual Antenna RTK GNSS
GNSS Sigantl	BDS: B1I、 B2I、 B3I GPS: L1C/A、 L2P (Y)/L2C、 L5 GLONASS: L1、 L2 Galileo: E1、 E5a、 E5b QZSS: L1、 L2、 L5
Time To First Fix(TTFF)	cold start <30S hot start <2S
Speed accuracy	0.03m/s
Position accuracy	Single Horizontal 1.5m Single Vertical 2.5m RTK Horizontal 1cm+1ppm RTK Vertical 2cm+1ppm
Heading accuracy	0.2° 1m Base Line
Timing	20ns

Attitude

Pitch/Roll	RTK:0.2° Signle:0.3°
Heading(Dual Antenna GNSS 1m Base Line)	0.2°

Mechanical & Electrical

Mechanical

Dimension	HI30R4N	25X20X3mm
	HI30R7N	40x30x5mm
Weight	HI30R4N	2.5g
	HI30R7N	9g
Material	SMD	
Temperature	-40-85°C	
Certification	RoHS/CE	

Electrical

Input voltage	HI30R4N	3.3-5.5V DC
	HI30R7N	3.3V DC
PD	HI30R4N	<220mw
	HI30R7N	<1.6w
Interface	UART(TTL)/CAN	
Frame Rate	100Hz	
CAN need CAN Chip e.g. TJA1044		

Ordering Information

图例

P/N

Name



HI30R4N-MI0-000

Inertial Navigation System



HI30R7N-MI0-000

Dual antenna Inertial Navigation System