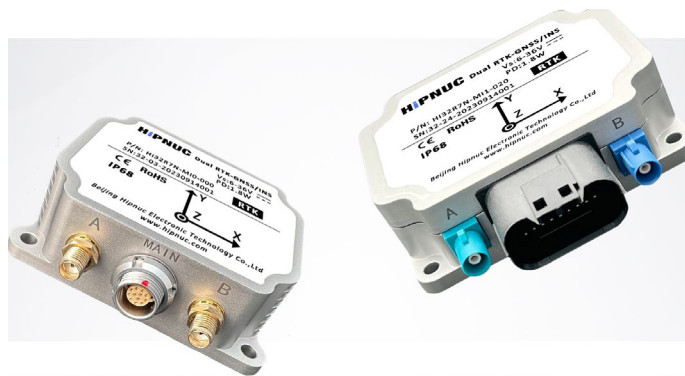


HI32 系列

High Performance Inertial Navigation System

The HI32 is a small, high-performance inertial navigation system, which can provide position and attitude in real time



The HI32 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 HI32 can be used in UAV, automotive, unmanned agricultural machinery, unmanned ships and other industries



Agricultural Machinery



Unmanned

Product Advantages

Hardware

- Industrial Redundant Sensor
- Smart Production System, Traceable Products
- Multiple Interfaces: RS-232/RS-422/CAN/SYNC
- IP68, Operating Temperature: -40 to 85° C
- 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, IP68, CE

Product Selection

HI32ab-c-def

| HI Company | a Sensors | b TC | c Interface | d Reverse | e Cable-Type | f Customize |
|-----------------|----------------------------|--------------|-------------|-----------|------------------------|-------------|
| 32 Product Line | R6 4XIMU+Mag+RTK-GNSS | N Without TC | MI0 | 0 default | 0 Circular Connector | 0 default |
| | R7 4XIMU+Mag+Dual RTK-GNSS | T With TC | MI1 MI2 | | 1 J30J 2 MX23A18NF1 | others OEM |

e.g. HI32R7N-MI0-000 Mag:Magnetometer TC:Temperature Compensated

| IMU | Accelerometer | Gyroscope | Magnetometer |
|----------------------------|---------------|------------|--------------|
| Range | ±6g | ±250° /s | ±8Gauss |
| Resolution | 0.001g | 0.001° | 0.25mg |
| Bandwidth | 150Hz | 120Hz | TBD |
| Bias Stability(Allan 25°C) | 30ug | 2.5° | TBD |
| Random walks | 0.028m/s √ h | 0.3° / √ h | 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 |

Parameters

GNSS

| | |
|-------------------------|---|
| GNSS | 1408 channel Dual Antenna RTK GNSS |
| GNSS Signal | 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:0.1° Single:0.15° |
| Heading(Dual Antenna GNSS 1m Base Line) | 0.2° |

Mechanical & Electrical

Mechanical



| | | |
|---------------|--------------------|--------------|
| Dimension | Circular Connector | 75X60X25.2mm |
| | MX23A18NF1 | 85x67x26mm |
| Weight | Circular Connector | 180g |
| | MX23A18NF1 | TBD |
| Material | Aluminum alloy | |
| Temperature | -40-85°C | |
| Certification | RoHS/CE/IP67/IP68 | |

Electrical


| | |
|---------------|-------------------|
| Input voltage | 6-36V DC |
| PD 25°C | <1.8W |
| Interface | RS-232/RS-422/CAN |
| Frame Rate | 100Hz |

Ordering Information

Circular Connector

| Diagram | P/N | Name |
|---|-----------------|---|
|  | HI32R6N-MI0-000 | Single antenna inertial navigation system |
| | HI32R6N-MI1-000 | Single antenna inertial navigation system |
| | HI32R6N-MI2-000 | Single antenna inertial navigation system |
| Diagram | P/N | Name |
|  | HI32R7N-MI0-000 | Dual antenna inertial navigation system |
| | HI32R7N-MI1-000 | Dual antenna inertial navigation system |
| | HI32R7N-MI2-000 | Dual antenna inertial navigation system |

MX23A18NF1

| Diagram | P/N | Name |
|--|-----------------|---|
|  | HI32R7N-MI0-020 | Dual antenna inertial navigation system |
| | HI32R7N-MI1-020 | Dual antenna inertial navigation system |

If you need J30 or other interfaces, you can contact us to customize

[Contact us](#)