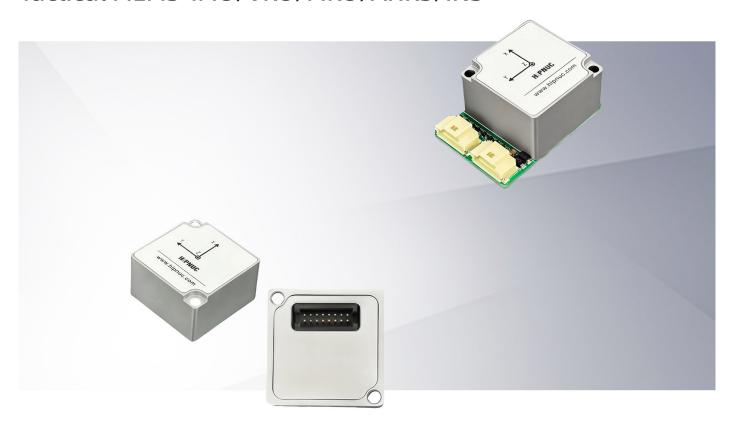
# **HI71 SERIES**

## Tactical MEMS-IMU/VRU/MRU/AHRS/INS



The HI71 series is an IMU/VRU/MRU/AHRS/INS sensor system based on tactical-grade MEMS-IMU, featuring proprietary adaptive Extended Kalman Filter, IMU noise dynamic analysis algorithm, carrier motion state analysis algorithm, and GNSS fusion algorithm to provide users with precise position, attitude, heave and velocity information.

#### **FEATURES**

- Compact size, tactical grade
- Multiple communication interfaces: UART/CAN (external transceiver required)
- Temperature compensation and turntable calibration
- Precise IMU/VRU/AHRS/INS with Extended Kalman Filter fusion
- Precise synchronization signals, supporting PPS and GPRMC time synchronization
- High accuracy maintained under high vibration conditions
- Heave 5cm/5%

#### **APPLICATIONS**

UAV

USV

Robot

Active Wave Compensation (AWC)

## **SPECIFICATIONS**

## Model

P/N	IMU	VRU	MRU	AHRS	Barometer	INS
HI71T2-MI0-000	$\checkmark$	$\checkmark$	×	×	×	×
HI71T4-MI0-000	$\checkmark$	$\checkmark$	×	$\checkmark$	$\checkmark$	×
HI71M4-MI0-000	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×
HI71N4-MI0-000	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

## **Fusion Accuracy**

Accelerometer	Calibrated
Gyroscope	Calibrated
Pitch/Roll	0.05°
Heading(VRU)	0.1°
Quaternion	Supported
Heave	5cm/5%

## Gyroscope

Range	± 320° /s
Bias Instability	0.3° /h
Bias Stability	0.5° /h
Noise Density	0.0006° /s/ √ Hz
Bandwidth(3dB)	80Hz

### Accelerometer

Range	± 16g
Bias Instability	0.01mg
Bias Stability	0.03mg
Noise Density	0.085 mg/√Hz
Bandwidth(3dB)	90Hz

### Interface

Communication	UART/CAN
Protocols	Binary/CANopen/J1939/NMEA
Output Frequency	Up to 1000Hz
SYNC	SYNC_IN、SYNC_OUT
Note1: CAN requires an	external CAN transceiver, such as the

TJA1044

## **Physical & Environmental**

Input Voltage	3.6-5V
Power Consumption	<370mW
Dimension	24X24X14mm
Weight	13g
Certification	Supports Rohs CE
Temperature	Supports -40-85℃

### **Software Suite**

GUI	CHCenter
SDK	C、STM32、Matlab、Python、Ros
Support	User manuals Data sheet Online communication

## **QUICK START**





The HI71 series evaluation board can be connected to the PC GUI via USB cable, allowing users to quickly evaluate the product through the graphical interface.

### **HIPNUC SERVICE**

We provide complimentary technical support and lifetime firmware upgrades. All HI71 products include a 2-year warranty

- 1.Email sales@hipnuc.com
- 2.Website

www.hipnuc.com