

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	√	√	×	×	×	×
HI71T4-MI0-000	√	√	×	√	√	×
HI71M4-MI0-000	√	√	√	√	√	×
HI71N4-MI0-000	√	√	√	√	√	√

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°C

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

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2.Website

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