



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



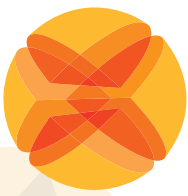
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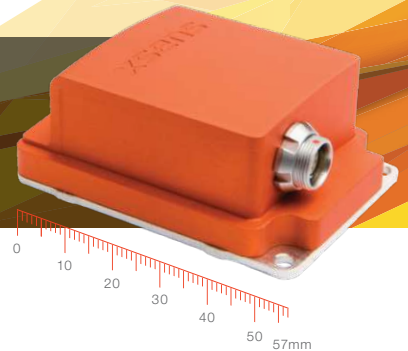


xsens

MTi 10-series

The reliable industry standard for MEMS based IMU, VRU and AHRS

- ✓ Industry-proven, cost-effective MEMS based orientation sensor
- ✓ Full-featured sensor fusion algorithm with easy to use SDK
- ✓ 3 integration levels available: IMU, VRU and AHRS



Proven Xsens sensor fusion algorithm

- Superior heading tracking using Active Heading Stabilization (AHS)
- In-run Compass Calibration (ICC)
- XKF3 sensor fusion algorithm trusted by high-profile customers
- Selectable filter profiles for range of applications

Excellent hardware design

- High quality industrial grade components
- Signal processing pipeline, optimized for industrial applications
- Low latency for real-time applications
- 10 kHz simultaneous sampling, 2 kHz SDI algorithm with coning/sculling compensation
- Wide array of synchronization options

Easy software integration

- Extensive suite of configurable output formats, calculated onboard the MTi
- MT Software Suite with intuitive GUI
- Complete SDK for all operating systems
- Support for Robotic Operating System (ROS)
- Xsens Xbus protocol or ASCII (NMEA)
- Access to BASE (by Xsens), an extensive knowledge base and community forum

Specification highlights

- Available as IP67 encased MTi or OEM board
- Choice of several interfaces and onboard USB
- All Xsens products are fully interchangeable
- Cost-effective system integrator solution

Product Overview

		MTi-10 IMU	MTi-20 VRU	MTi-30 AHRS
Calibrated Sensor Data		yes	yes	yes
Roll/pitch	Static	-	0.2°	0.2°
	Dynamic	-	0.5°	0.5°
Yaw	In homogenous magnetic field	-	Active Heading Stabilization (AHS)	1.0°

All above specifications based on typical application scenarios

Sensor specifications

	Gyroscopes	Accelerometers
Standard full range *	+/- 450 °/s	+/- 20 g
Initial bias error	0.2 °/s	5 mg
In-run bias stability	18 °/h	15 µg
Bandwidth (-3 dB)	415 Hz	375 Hz
Noise density	0.03 °/s/√Hz	60 µg/√Hz
g-sensitivity (calibrated)	0.006 °/s/g	N/A
Non-orthogonality	0.05 deg	0.05 deg
Non-linearity	0.03%	0.1%
Magnetometer		
Standard full range	+/- 8 G	
Total RMS noise	0.5 mG	
Non-linearity	0.2%	
Resolution	0.25 mG	

* Optional +/- 1000 °/s available on request.

System specifications

Input voltage	4.5 to 34V or 3V3	Interfaces	RS232/RS422/RS485/USB/UART
Typical power consumption	550 mW @ 5V	Latency	<2 ms
IP-rating	IP67 (encased)	Sync options	SyncIn, SyncOut, Clock sync
Temperature (in use)	-40 to 85 °C	Interface protocol	Xbus or ASCII (NMEA)
Casing material	Anodized aluminum 6082	Mounting orientation	No restriction, full 360° in all axes
Sampling frequency	10 kHz/channel (60 kS/s)	Built-in self test (BIT)	Gyroscopes, accelerometers, magnetometer
Clock drift	10 ppm or external reference	MTBF	300,000 hours
Output frequency	Up to 2 kHz		



MTi 10-series
Development Kit:
MTi, software and cabling



MTi encased:
57x42x23.5 mm, 52g,
9-pins push-pull connector



MTi OEM:
37x33x12 mm, 11g,
16-pins header