



xsens

MTi series

A complete line of MEMS Motion Trackers
IMU, VRU, AHRS and GNSS/INS

Xsens MTi product line overview

| MTi 1-series | Roll/Pitch Static | Roll/Pitch Dynamic | Yaw | Sensor fusion core | Position & Velocity |
|--------------------|-------------------|--------------------|------------------------------------|--------------------|---------------------|
| MTi-1 IMU | - | - | - | - | - |
| MTi-2 VRU | 0.5° | 0.8° | Active Heading Stabilization (AHS) | XKF | - |
| MTi-3 AHRS | 0.5° | 0.8° | 2.0° | XKF | - |
| MTi-7 GNSS/INS | 0.5° | 0.5° | 1.5° | XKF | 1 m 0.05 m/s |
| MTi 600-series | | | | | |
| MTi-610 IMU | - | - | - | - | - |
| MTi-620 VRU | 0.2° | 0.5° | AHS | XKF | - |
| MTi-630 AHRS | 0.2° | 0.5° | 1.0° | XKF | - |
| MTi-670 GNSS/INS | 0.2° | 0.5° | 1.0° | XKF | 1m 0.05m/s |
| MTi 10-series | | | | | |
| MTi-10 IMU | - | - | - | - | - |
| MTi-20 VRU | 0.2° | 0.5° | Active Heading Stabilization (AHS) | XKF | - |
| MTi-30 AHRS | 0.2° | 0.5° | 1.0° | XKF | - |
| MTi 100-series | | | | | |
| MTi-100 IMU | - | - | - | - | - |
| MTi-200 VRU | 0.2° | 0.3° | Active Heading Stabilization (AHS) | XEE | - |
| MTi-300 AHRS | 0.2° | 0.3° | 1.0° | XEE | - |
| MTi-G-710 GNSS/INS | 0.2° | 0.3° | 0.8° | XEE | 1 m 0.05 m/s |

All products from the MTi-series are fully interchangeable
All above specifications based on typical application scenarios



BASE (base.xsens.com) by Xsens is an online support platform with a knowledge base and community forum on 3D motion tracking technology and products. This enables faster and easier system integration by offering a large source of high-quality technical information.

Knowledge base (FAQ)

The knowledge base provides articles written by Xsens' (Field Application) engineers. Topics are best practices, tips and tricks for the use of Xsens' products and inside information about installation, MEMS sensors and GNSS receivers, hardware design, CAD-files, system architecture, low-level communication and sensor fusion algorithms.

Community forum

The community forum is an online forum that gives direct access to Xsens' engineers and other Xsens users. As users may have faced similar challenges, the answer may already be on the forum.

Tutorial videos

Tutorial videos and demos, covering topics such as calibration, best practices, software and hardware integration.

Integration of the MTi is very straightforward with the Xsens MT Software Suite. The MT Software Suite is an easy-to-use and complete software package available for both Windows and Linux that allows you to test, prototype and develop your application.

The MT Software Suite consists of:

| | |
|------------------------------------|---|
| MT Manager | An intuitive Graphical User Interface (GUI), including configuration and recording tools, graphs and a serial port viewer to help understand the XBus protocol. |
| Open source Xsens Device API (XDA) | Xsens' Device Advanced Programming Interface has recently been made open source. The XDA allows you to create customized software for your PC or (micro-)controller software such that it can connect, configure, communicate and interact with the MTi. Interfaces for common programming languages as well as source code for lower communication levels are available. The XDA is supported by any platform running a Linux or Windows operating system. |
| Example code | To make starting with the MTi even easier, example code is provided in various programming languages, including C++, C#, Python and Matlab. A ROS node is supported and maintained by Xsens engineers. |
| Magnetic Field Mapper | An advanced Windows/Linux tool and complementary SDK used to calibrate the MTi for hard- and soft iron effects. A proper magnetic calibration is essential for obtaining an accurate North-referenced Heading. A calibration can be executed during normal operation; there are no restrictions on the trajectories or rotations. Additionally, in-run calibration features are available. |
| Documentation | Full (HTML-)documentation on the MTi, API, SDK and application notes. |



Xsens supplies miniature MEMS based motion trackers (IMU, VRU, AHRS and GNSS/INS) for industrial applications such as antenna/camera stabilization and unmanned system control.



Development kit

The best way to start with the MTi is with the complete MTi Development Kit. This kit will make development very easy. The MTi Development Kit contains the following items:

- An MTi
- (optional) a Development Board
- (optional) a GNSS daughter card and antenna
- Cable for USB or serial communication
- MT Software Suite for any operating system

ABOUT XSSENS

Xsens is the leading innovator in 3D motion tracking technology and products. Its sensor fusion technologies enable a seamless interaction between the physical and the digital world in applications such as industrial control and stabilization, health, sports and 3D character animation. Clients and partners include Electronic Arts, NBC Universal, Daimler, Autodesk, ABB, Siemens and various other leading institutes and companies throughout the world. Xsens is part of mCube, the provider of the world's smallest MEMS motion sensors, key enablers for the Internet of Moving Things. Xsens has offices in Enschede, Los Angeles, Shanghai and Hong Kong.

Visit xsens.com/distributors for an overview of Xsens' worldwide distributor network

Xsens Netherlands

Xsens Technologies B.V.
P.O. Box 559
7500 AN Enschede
The Netherlands

Phone: +31 88 97367 00
Fax: +31 88 97367 01
Email: info@xsens.com

Xsens North America Inc.

101 N. Pacific Coast Hwy,
Suite 306
El Segundo, CA 90245
North America

Phone: 310-481-1800
Fax: 310-416-9044
Email: info@xsens.com

Xsens AsiaPac

Unit 208, Bldg 16W
Hong Kong Science Park
Shatin
Hong Kong

Phone: +852 3618 9080
Fax: +852 3705 8994
Email: info@xsens.com

Building 1, 2nd Floor
No.333 Huangqing Road
PRC 201899
Shanghai

Phone: +86 021 31760067
Fax: +86 021 31760067
Email: china@xsens.com

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