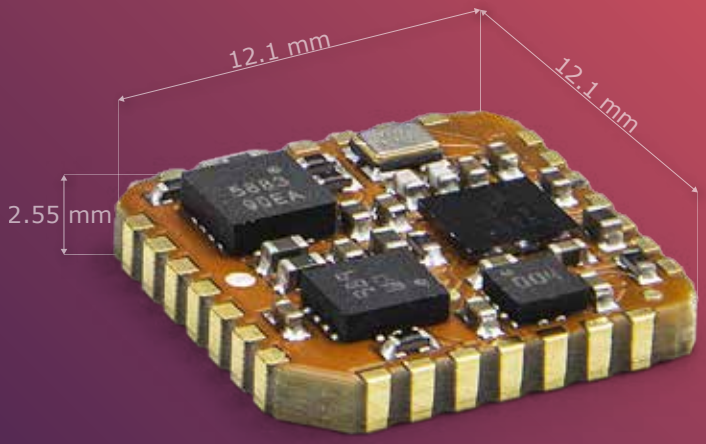
MTi-1

- **Miniature form factor (12x12 mm)**
- **Easy integration**
- **Development Kit available**

The MTi-1 is a self-contained Inertial Measurement Unit (IMU) as a 12.1 x 12.1 mm module. The Xsens optimized strapdown algorithm (AttitudeEngine™) performs high-speed dead-reckoning calculations at 1 kHz allowing accurate capture of high frequency motions.The MTi-1 IMU is a cost-effective module for a wide range of (embedded) applications. It relieves users from the design, integration and maintenance of gyroscopes, accelerometers and other sensors.

The MTi-1 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.



- 3D models available on request

This document is informational and not binding.
Complete and detailed specifications are available at
mtidocs.movella.com

IMU Performance

Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	6 deg/h
Bandwidth (-3dB)	230 Hz
Noise Density	0.003 º/s/√Hz

Accelerometer

Standard full range	16 g
In-run bias stability	40 µg
Bandwidth (-3dB)	230 Hz
Noise Density	70 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP00
Operating Temperature	-40 to 85 ºC
Casing material	PCB
Mounting orientation	No restriction, full 360º in all axes
Dimensions	12.1 x 12.1 x 2.55 mm
Connector	SMD, footprint compatible with JEDEC PLCC-28
Weight	0.6 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	2.8 to 3.6V
Power consumption (typ)	<100 mW @ 3V

Interfaces / IO

Interfaces	UART, SPI, I²C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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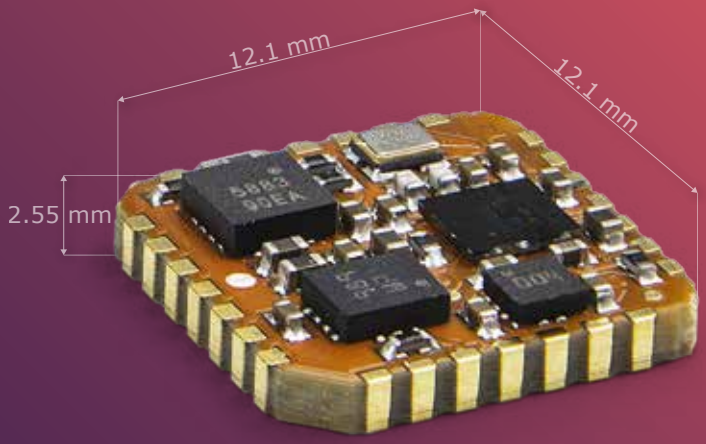
MTi-2

- **Miniature form factor (12x12 mm)**
- **Easy integration**
- **Development Kit available**

The MTi-2 is a self-contained Vertical Reference Unit (VRU) and Active Heading Tracker (AHT) as a 12.1 x 12.1 mm module. The Xsens optimized strapdown algorithm (AttitudeEngine™) performs high-speed dead-reckoning calculations at 1 kHz allowing accurate capture of high frequency motions. Xsens' industry-leading sensor fusion algorithm provides high accuracy and sensor auto-calibration in a cost-effective module for a wide range of (embedded) applications. It relieves users from the design, integration and maintenance of gyroscopes, accelerometers and other sensors.

The MTi-2 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.



- 3D models available on request

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor fusion performance

Roll, Pitch	0.5 deg RMS
Yaw/Heading	unreferenced, low drift
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	6 deg/h
Bandwidth (-3dB)	230 Hz
Noise Density	0.003 º/s/√Hz

Accelerometer

Standard full range	16 g
In-run bias stability	40 µg
Bandwidth (-3dB)	230 Hz
Noise Density	70 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP00
Operating Temperature	-40 to 85 ºC
Casing material	PCB
Mounting orientation	No restriction, full 360º in all axes
Dimensions	12.1 x 12.1 x 2.55 mm
Connector	SMD, footprint compatible with JEDEC PLCC-28
Weight	0.6 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	2.8 to 3.6V
Power consumption (typ)	<100 mW @ 3V

Interfaces / IO

Interfaces	UART, SPI, I²C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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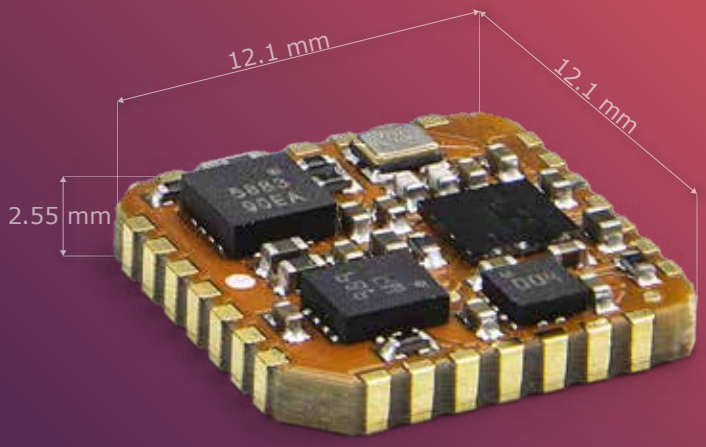
MTi-3

- **Miniature form factor (12x12 mm)**
- **Easy integration**
- **Development Kit available**

The MTi-3 is a self-contained Attitude and Heading Reference System (AHRS) as a 12.1 x 12.1 mm module. The Xsens optimized strapdown algorithm (AttitudeEngine™) performs high-speed dead-reckoning calculations at 1 kHz allowing accurate capture of high frequency motions. Xsens' industry-leading sensor fusion algorithm provides high accuracy and sensor auto-calibration in a cost-effective module for a wide range of (embedded) applications. It relieves users from the design, integration and maintenance of gyroscopes, accelerometers and other sensors.

The MTi-3 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.



- 3D models available on request

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor fusion performance

Roll, Pitch	0.5 deg RMS
Yaw/Heading	2 deg RMS
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	6 deg/h
Bandwidth (-3dB)	230 Hz
Noise Density	0.003 º/s/√Hz

Accelerometer

Standard full range	16 g
In-run bias stability	40 µg
Bandwidth (-3dB)	230 Hz
Noise Density	70 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP00
Operating Temperature	-40 to 85 ºC
Casing material	PCB
Mounting orientation	No restriction, full 360º in all axes
Dimensions	12.1 x 12.1 x 2.55 mm
Connector	SMD, footprint compatible with JEDEC PLCC-28
Weight	0.6 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	2.8 to 3.6V
Power consumption (typ)	<100 mW @ 3V

Interfaces / IO

Interfaces	UART, SPI, I²C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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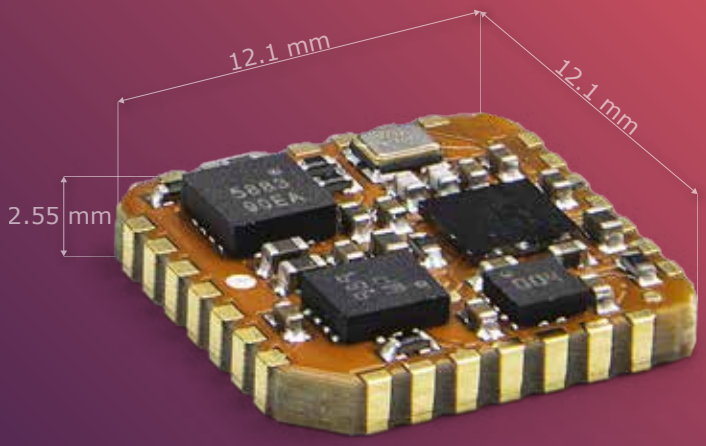
MTi-7

- **Miniature form factor (12x12 mm)**
- **Easy integration**
- **Development Kit available**

The MTi-7 is a miniature GNSS/INS as a 12.1 x 12.1 mm module with an interface to an external GNSS receiver. The Xsens optimized strapdown algorithm (AttitudeEngine™) performs high-speed dead-reckoning calculations at 1 kHz allowing accurate capture of high frequency motions. Xsens' industry-leading sensor fusion algorithm provides high accuracy and sensor auto-calibration in a cost-effective module for a wide range of (embedded) outdoor applications. It relieves users from the design, integration and maintenance of gyroscopes, accelerometers and other sensors.

The MTi-7 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.



• 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor fusion performance

Roll, Pitch	0.5 deg RMS
Yaw/Heading	1.5 deg RMS
Position	1 m CEP[1]
Velocity	0.05 m/s RMS

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	6 deg/h
Bandwidth (-3dB)	230 Hz
Noise Density	0.003 º/s/√Hz

Accelerometer

Standard full range	16 g
In-run bias stability	40 µg
Bandwidth (-3dB)	230 Hz
Noise Density	70 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

GNSS Receiver

GNSS receiver interface	UART (NMEA, UBX, beta:SBF/GSOF)
GNSS precision	Standard

Barometer

Barometer interface	Yes (SPI)

[1] *GNSS receiver from DK is used, depending on GNSS conditions.*

Mechanical

IP-rating	IP00
Operating Temperature	-40 to 85 ºC
Casing material	PCB
Mounting orientation	No restriction, full 360º in all axes
Dimensions	12.1 x 12.1 x 2.55 mm
Connector	SMD, footprint compatible with JEDEC PLCC-28
Weight	0.6 g
Certifications	CE, FCC,RoHS

Electrical

Input voltage	2.8 to 3.6V
Power consumption (typ)	<150 mW @ 3V

Interfaces / IO

Interfaces	UART, SPI, I²C
Sync Options	Yes
Protocols	Xbus, NMEAin
Clock drift	1 ppm (external)
Output Frequency	Up to 1 kHz
Built-in-self test	Gyr, Acc, Mag, Baro, GNSS

Software Suite

GUI (Windows/Linux)	MT Manager Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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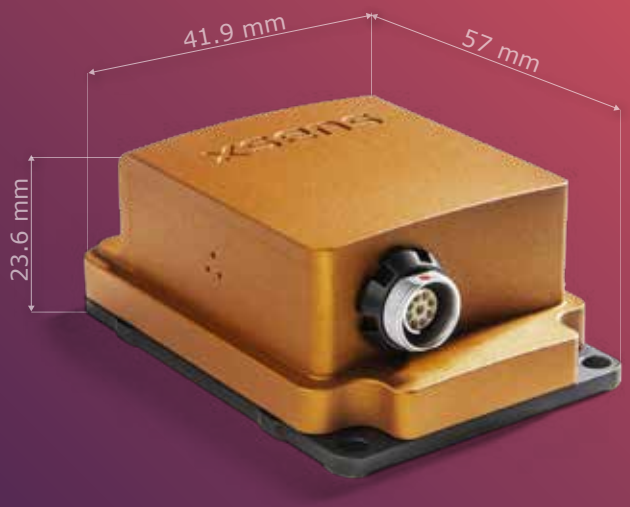
MTi-100

- **Movella's high-performance product line**
- **Market leading strapdown integration (SDI) and synchronization options**
- **Complete SDK and development kits available**

The MTi-100 features vibration-rejecting gyroscopes and offers high-quality inertial data, even in challenging environments.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high-frequency outputs, and has configurable output settings for synchronization with any third-party device.

The MTi-100 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.



- White label and OEM integration options available
- 3D models available on request

Sensor fusion performance

Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	450 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	415 Hz
Noise Density	0.01 º/s/√Hz
g-sensitivity (calibr.)	0.003 º/s/g

Accelerometer

Standard full range	20 g
In-run bias stability	15 µg
Bandwidth (-3dB)	375 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1100 hPa
Total RMS noise	3.6 Pa
Resolution	~0.08m

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP67
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	55 g
Certifications	CE, FCC, RoHS, MIL-STD-202

Electrical

Input voltage	3V3, 4.5V-34V
Power consumption (typ)	520 mW

Interfaces / IO

Interfaces	USB, RS232, RS422, UART
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA)
Clock drift	10 ppm (or external)
Output Frequency	Up to 2kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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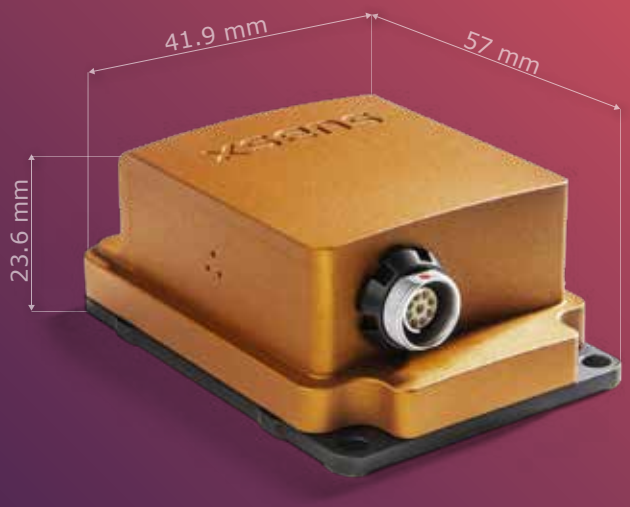
MTi-200

- **Movella's high-performance product line**
- **0.2 deg in roll/pitch accuracy, ultra low heading drift**
- **Complete SDK and development kits available**

The MTi-200 features vibration-rejecting gyroscopes and offers high-quality inertial data, even in challenging environments.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high-frequency outputs, and has configurable output settings for synchronization with any third-party device.

The MTi-200 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.



- White label and OEM integration options available
- 3D models available on request

Sensor fusion performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	unreferenced, low drift
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	450 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	415 Hz
Noise Density	0.01 º/s/√Hz
g-sensitivity (calibr.)	0.003 º/s/g

Accelerometer

Standard full range	20 g
In-run bias stability	15 µg
Bandwidth (-3dB)	375 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1100 hPa
Total RMS noise	3.6 Pa
Resolution	~0.08m

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP67
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	55 g
Certifications	CE, FCC, RoHS, MIL-STD-202

Electrical

Input voltage	3V3, 4.5V-34V
Power consumption (typ)	520 mW

Interfaces / IO

Interfaces	USB, RS232, RS422, UART
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA)
Clock drift	10 ppm (or external)
Output Frequency	Up to 2kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#,Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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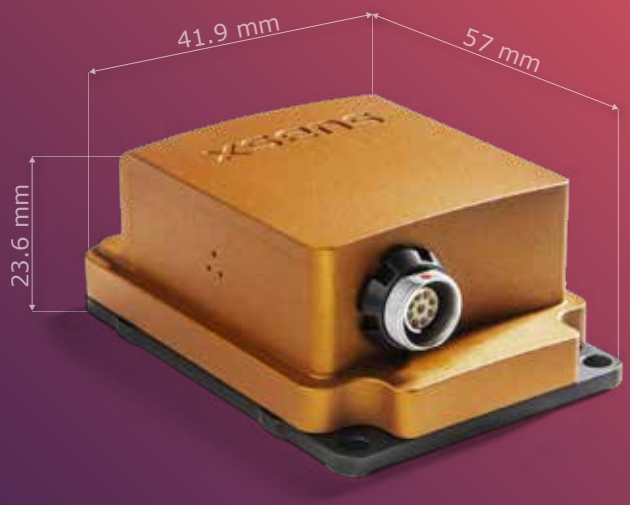
MTi-300

- **Movella's high-performance product line**
- **0.2 deg in roll/pitch, 1 deg in heading accuracy**
- **Complete SDK and development kits available**

The MTi-300 features vibration-rejecting gyroscopes and offers high-quality inertial data, even in challenging environments.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high-frequency outputs, and has configurable output settings for synchronization with any third-party device.

The MTi-300 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.



- White label and OEM integration options available
- 3D models available on request

Sensor fusion performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	1 deg RMS
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	450 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	415 Hz
Noise Density	0.01 º/s/√Hz
g-sensitivity (calibr.)	0.003 º/s/g

Accelerometer

Standard full range	20 g
In-run bias stability	15 µg
Bandwidth (-3dB)	375 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1100 hPa
Total RMS noise	3.6 Pa
Resolution	~0.08m

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP67
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	55 g
Certifications	CE, FCC, RoHS, MIL-STD-202

Electrical

Input voltage	3V3, 4.5V-34V
Power consumption (typ)	520 mW

Interfaces / IO

Interfaces	USB, RS232, RS422, UART
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA)
Clock drift	10 ppm (or external)
Output Frequency	Up to 2kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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MTi-610

- **Small, IP51-rated IMU**
- **Factory-calibrated inertial data**
- **Full Graphical User Interface (GUI) and Software Development Kit (SDK) available**

The MTi-610 is a Inertial Measurement Unit with a small form-factor design for deep integration into your application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use motion tracking. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-610 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

IMU performance

Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.5x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	UART, CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 2kHz, 400Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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MTi-620

- **Small, IP51-rated VRU/AHT**
- **0.2 deg roll/pitch accuracy**
- **Full Graphical User Interface (GUI) and Software Development Kit (SDK) available**

The MTi-620 is a Vertical Reference Unit (VRU) or Active Heading Tracker (AHT) with a small form-factor design for deep integration into your application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use orientation tracking. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-620 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	unreferenced, low drift
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.5x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	UART, CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 2 kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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MTi-630

- **Small, IP51-rated AHRS**
- **0.2 deg roll/pitch, 1 deg heading accuracy**
- **Full Graphical User Interface (GUI) and Software Development Kit (SDK) available**

The MTi-630 is an Attitude and Heading Reference System with a small form-factor design for deep integration into your application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use orientation tracking. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-630 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	1 deg RMS
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.5x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	UART, CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 2 kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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MTi-630R

- **Rugged, IP68-rated AHRS**
- **0.2 deg roll/pitch, 1 deg heading accuracy**
- **Full Graphical User Interface (GUI) and Software Development Kit (SDK) available**

The MTi-630R is an Attitude and Heading Reference System with a small form-factor design for deep integration into your application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use orientation tracking. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-630R is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	1 deg RMS
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

This document is informational and not binding.
Complete and detailed specifications are available at **mtidocs.movella.com**

Mechanical

IP-rating	IP68
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	56.5x40.9x24.75 mm
Connector	Main: ODU (AMC HD 12 pins)
Weight	75 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 2 kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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MTi-670

- **Small, IP51-rated GNSS/INS**
- **0.2 deg roll/pitch & meter level position accuracy**
- **Connects to external GNSS receiver**

The MTi-670 is a GNSS/INS with a small form-factor design for deep integration into your outdoor application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use meter level positioning and orientation tracking. It features an interface to an external GNSS receiver so you can efficiently design your application. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-670 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	0.8 deg RMS
Position	1m CEP[1]
Velocity	0.05m/s RMS

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

GNSS Receiver

Brand	Generic NMEA or u-blox, beta:SBF/GSOF
Model	External
RTK correction input/RTCM input port	External

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.5x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	UART, CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	1 ppm (external)
Output Frequency	Up to 2 kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro, GNSS

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

[1] *ZED F9 GNSS receiver is used, depending on GNSS conditions.*

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MTi-670G

- **Rugged, IP68-rated GNSS/INS**
- **0.2 deg roll/pitch & meter level position accuracy**
- **Internal u-blox ZED F9 GNSS receiver**

The MTi-670G is a GNSS/INS with a ruggedized housing featuring IP68 protection against environmental influences. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use meter-level positioning and orientation tracking for outdoor applications. It features an incredibly powerful onboard u-blox ZED F9 GNSS receiver to provide superior positioning performance. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-670G is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	0.8 deg RMS
Position	1m CEP[1]
Velocity	0.05m/s RMS

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

GNSS Receiver

Brand	u-blox
Model	ZED F9
RTCM input port	n/a

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

Mechanical

IP-rating	IP68
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	56.5x40.9x36.75 mm
Connector	Main: ODU (AMC HD 12 pins) RTCM: DNC Antenna: SMA
Weight	98 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<1 W

Interfaces / IO

Interfaces	CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	1 ppm
Output Frequency	Up to 2kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro, GNSS

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

[1] *Depending on GNSS conditions.*

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MTi-680

- **Small, IP51-rated RTK GNSS/INS**
- **0.2 deg roll/pitch & cm-level position accuracy**
- **Connects to external RTK GNSS receiver**

The MTi-680 is an RTK GNSS/INS with a small form-factor design for deep integration into your application. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use cm-level positioning and orientation tracking for outdoor applications. It features an interface to an external RTK GNSS receiver so you can efficiently design your application. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-680 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	0.5 deg RMS
Position	1cm+1ppm CEP[1]
Velocity	0.05m/s RMS

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

GNSS Receiver

Brand	Generic NMEA or u-blox, beta:SBF/GSOF
Model	External
RTK correction input/RTCM input port	External

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.5x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<0.5 W

Interfaces / IO

Interfaces	UART, CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	1ppm (external)
Output Frequency	Up to 2 kHz, 400 Hz SDI
Built-in-self test	Gyr, Acc, Mag, Baro, GNSS

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

[1] *GNSS receiver from DK is used, depending on GNSS conditions.*

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MTi-680G

- **Rugged, IP68 rated RTK GNSS/INS**
- **0.2 deg roll/pitch & cm-level position accuracy**
- **Internal u-blox ZED F9 RTK enabled GNSS receiver**

The MTi-680G is an RTK enabled GNSS/INS with a ruggedized housing featuring IP68 protection against environmental influences. Building on the proven Xsens MTi 600-series technology it enables a robust and easy to use cm-level positioning and orientation tracking for outdoor applications. It features a incredibly powerful onboard u-blox ZED F9 RTK GNSS receiver to provide superior positioning performance. It is designed for easy integration and seamless interfacing with other equipment.

The MTi-680G is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms including ROS.

- White label and OEM integration options available
- 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor Fusion Performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	0.5 deg RMS
Position	1cm+1ppm CEP[1]
Velocity	0.05m/s RMS

Gyroscope

Standard full range	2000 deg/s
In-run bias stability	8 deg/h
Bandwidth (-3dB)	520 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.1 º/s/g

Accelerometer

Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) µg
Bandwidth (-3dB)	500 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

RTK GNSS Receiver

Brand	u-blox
Model	ZED F9
RTK correction input	RTCM 3.2/3.3
RTCM input port	RS232 (38K4-921K6 bit/s)

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	<1 W

[1] *Depending on GNSS conditions*

Barometer

Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

Mechanical

IP-rating	IP68
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	56.50x40.90x36.75 mm
Connector	Main: ODU (AMC HD 12 pins) RTCM: ODU (AMC HD 4 pins) Antenna: SMA
Weight	98 g
Certifications	CE, FCC, RoHS

Interfaces / IO

Interfaces	CAN, RS232
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA) or CAN
Clock drift	1ppm
Output Frequency	Up to 2kHz, 400 Hz SDI
Built-in-self test	Gyro, Acc, Mag, Baro, GNSS

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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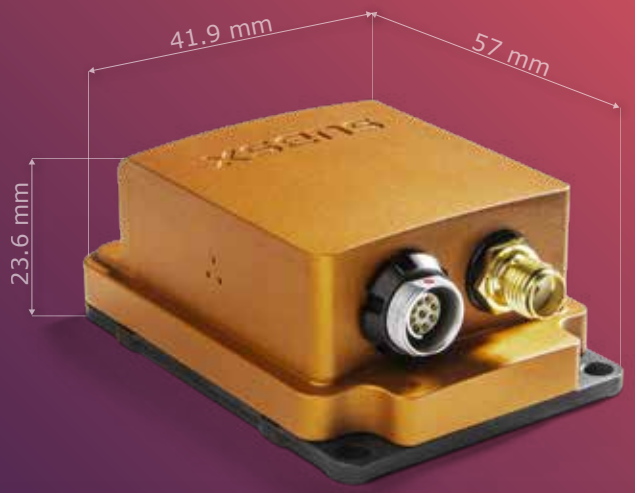
MTi-G-710

- **Movella's high-performance product line**
- **0.2 deg in roll/pitch, 0.8 deg in heading accuracy**
- **Complete SDK and development kits available**

The MTi-G-710 features vibration-rejecting gyroscopes, and offers high-quality position, velocity, acceleration, and orientation, even in challenging environments.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high-frequency position and orientation output, and has configurable output settings for synchronization with any third-party device.

The MTi-G-710 is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.



- White label and OEM integration options available
- 3D models available on request

This document is informational and not binding. Complete and detailed specifications are available at **mtidocs.movella.com**

Sensor fusion performance

Roll, Pitch	0.2 deg RMS
Yaw/Heading	0.8 deg RMS
Position	1.0 m (1σ STD)
Velocity	0.05 m/s (1σ STD)

Gyroscope

Standard full range	450 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	415 Hz
Noise Density	0.01 º/s/√Hz
g-sensitivity (calibr.)	0.003 º/s/g

Accelerometer

Standard full range	20 g
In-run bias stability	15 µg
Bandwidth (-3dB)	375 Hz
Noise Density	60 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	0.5 mG
Non-linearity	0.2%
Resolution	0.25 mG

GNSS Receiver

Brand	u-blox
Model	MAX-M8
RTCM input port	n/a

Barometer

Standard full range	300-1100 hPa
Total RMS noise	3.6 Pa
Resolution	~0.08m

Mechanical

IP-rating	IP67
Operating Temperature	-40 to 85 ºC
Casing material	Aluminum
Mounting orientation	No restriction, full 360º in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	58 g
Certifications	CE, FCC, RoHS, MIL-STD-202

Electrical

Input voltage	3V3, 4.5V-34V
Power consumption (typ)	660 mW

Interfaces / IO

Interfaces	USB, RS232, RS422, UART
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA)
Clock drift	1 ppm
Output Frequency	Up to 2kHz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Nucleo, public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

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Xsens Sirius AHRS

- Achieve new levels of accuracy with high-quality calibrated roll, pitch and yaw data
- Vibration- and shock- resistant signal pipeline
- Rugged and military standard certified
- Flexible interfaces and protocols for seamless integration

Description

The Xsens Sirius AHRS features vibration- and shock-resistant signal pipeline and offers high-quality calibrated inertial and orientation data (roll, pitch. yaw), even in extreme vibration conditions.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high frequency output, robustness against magnetic disturbances, and has configurable output settings for synchronization with any third-party device.

The Xsens Sirius AHRS is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.

- White label options available
- 3D models available on request

Sensor fusion performance

Roll, Pitch	0.2 ° RMS
Yaw/Heading	<1 ° RMS
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	± 300 °/s
In-run bias stability	7 °/h
Bandwidth (-3dB)	400 Hz
Noise Density	0.003 °/s/√Hz
g-sensitivity (calibr.)	0.08 °/s/g

Accelerometer

Standard full range	± 8 g
In-run bias stability	15 µg
Bandwidth (-3dB)	470 Hz
Noise Density	15 µg/√Hz

Magnetometer

Standard full range	± 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP68
Operating Temperature	-40 to +85 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° in all axes
Dimensions	56.50 x 40.90 x 24.75 mm
Connector	Main: ODU (AMC HD 12 pins)
Weight	78.5g grams
Certifications	CE, FCC, RoHS, MIL-STD-202, ITAR free

Electrical

Input voltage	4.5V-24V
Power consumption (typ)	520 mW

Interfaces / IO

Interfaces	RS232, RS422, CAN
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA), CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 400Hz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.
This document is informational and not binding. Complete and detailed specifications are available at mtidocs.movella.com

Xsens Sirius IMU

- Achieve new levels of accuracy with high-quality calibrated IMU data
- Vibration- and shock- resistant signal pipeline
- Rugged and military standard certified
- Flexible interfaces and protocols for seamless integration

Description

The Xsens Sirius IMU features vibration- and shock-resistant signal pipeline and offers high-quality calibrated inertial data, even in extreme vibration conditions.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high frequency output, robustness against magnetic disturbances, and has configurable output settings for synchronization with any third-party device.

The Xsens Sirius IMU is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.

- White label options available
- 3D models available on request

Sensor fusion performance

Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	± 300 °/s
In-run bias stability	7 °/h
Bandwidth (-3dB)	400 Hz
Noise Density	0.003 °/s/√Hz
g-sensitivity (calibr.)	0.08 °/s/g

Accelerometer

Standard full range	± 8 g
In-run bias stability	15 µg
Bandwidth (-3dB)	470 Hz
Noise Density	15 µg/√Hz

Magnetometer

Standard full range	± 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP68
Operating Temperature	-40 to +85 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° in all axes
Dimensions	56.50 x 40.90 x 24.75 mm
Connector	Main: ODU (AMC HD 12 pins)
Weight	78.5 grams
Certifications	CE, FCC, RoHS, MIL-STD-202, ITAR free

Electrical

Input voltage	4.5V-24V
Power consumption (typ)	<1W

Interfaces / IO

Interfaces	RS232, RS422, CAN
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA), CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 400Hz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.
This document is informational and not binding. Complete and detailed specifications are available at mtidocs.movella.com

Xsens Sirius VRU

- Achieve new levels of accuracy with high-quality calibrated roll, pitch and unreferenced yaw data
- Vibration- and shock- resistant signal pipeline
- Rugged and military standard certified
- Flexible interface and protocols for seamless integration

Description

The Xsens Sirius VRU features vibration- and shock-resistant signal pipeline and offers high-quality calibrated inertial data and orientation data (roll, pitch, unreferenced yaw), even in extreme vibration conditions.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high frequency output, robustness against magnetic disturbances, and has configurable output settings for synchronization with any third-party device.

The Xsens Sirius VRU is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.

- White label options available
- 3D models available on request

Sensor fusion performance

Roll, Pitch	0.2 ° RMS
Yaw/Heading	unreferenced, low drift
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	± 300 °/s
In-run bias stability	7 °/h
Bandwidth (-3dB)	400 Hz
Noise Density	0.003 °/s/√Hz
g-sensitivity (calibr.)	0.08 °/s/g

Accelerometer

Standard full range	± 8 g
In-run bias stability	15 µg
Bandwidth (-3dB)	470 Hz
Noise Density	15 µg/√Hz

Magnetometer

Standard full range	+/- 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP68
Operating Temperature	-40 to +85 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° in all axes
Dimensions	56.50 x 40.90 x 24.75 mm
Connector	Main: ODU (AMC HD 12 pins)
Weight	78.5 grams
Certifications	CE, FCC, RoHS, MIL-STD-202, ITAR free

Electrical

Input voltage	4.5V-24V
Power consumption (typ)	<1W

Interfaces / IO

Interfaces	RS232, RS422, CAN
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA), CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 400Hz
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base

Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.
This document is informational and not binding. Complete and detailed specifications are available at mtidocs.movella.com