- 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 (AttitudeEngineTM) 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.



IMU Performance	
Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes
Gyroscope	
Standard full range	2000 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	255 Hz
Noise Density	0.007 ⁰/s/√Hz
g-sensitivity (calibr.)	0.001 º/s/g
Accelerometer	
Standard full range	16 g
In-run bias stability	30 µg
Bandwidth (-3dB)	324 (x,y) 262 (z) Hz
Noise Density	120 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	n/a
GNSS precision	n/a
RTCM input port	n/a
Barometer	
Barometer interface	n/a

Mechanical	
IP-rating	IP00
Operating Temperature	-40 to 85 °C
Casing material	PCB
Mounting orientation	No restriction, full 360° 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
Electrical	
Input voltage	2.19 to 3.6V
Power consumption (typ)	44 mW @ 3V
Interfaces / IO	
Interfaces	UART, SPI, I ² C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz, 100 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base

3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



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Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

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

The MTi-2 is a self-contained Vertical Reference Unit (VRU) as a 12.1 x 12.1 mm module. The Xsens optimized strapdown algorithm (AttitudeEngineTM) 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.

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	10 deg/h
Bandwidth (-3dB)	255 Hz
Noise Density	0.007 ⁰/s/√Hz
g-sensitivity (calibr.)	0.001 º/s/g
Accelerometer	
Standard full range	16 g
In-run bias stability	30 µg
Bandwidth (-3dB)	324 (x,y) 262 (z) Hz
Noise Density	120 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	n/a
GNSS precision	n/a
RTCM input port	n/a
Barometer	
Barometer interface	n/a



Mechanical	
IP-rating	IP00
Operating Temperature	-40 to 85 °C
Casing material	PCB
Mounting orientation	No restriction, full 360° 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
Electrical	
Input voltage	2.19 to 3.6V
Power consumption (typ)	44 mW @ 3V
Interfaces / IO	
Interfaces	UART, SPI, I ² C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz, 100 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals, community and knowledge base

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors





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

The MTi-3 is a self-contained Attitude Heading and Reference System (AHRS) as a 12.1 x 12.1 mm module. The Xsens optimized strapdown algorithm (AttitudeEngineTM) 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.

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	10 deg/h
Bandwidth (-3dB)	255 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.001 º/s/g
Accelerometer	
Standard full range	16 g
In-run bias stability	30 µg
Bandwidth (-3dB)	324 (x,y) 262 (z) Hz
Noise Density	120 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	n/a
GNSS precision	n/a
RTCM input port	n/a
Barometer	
Barometer interface	n/a



Mechanical	
IP-rating	IP00
Operating Temperature	-40 to 85 °C
Casing material	PCB
Mounting orientation	No restriction, full 360° 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
Electrical	
Input voltage	2.19 to 3.6V
Power consumption (typ)	44 mW @ 3V
Interfaces / IO	
Interfaces	UART, SPI, I ² C
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	Up to 1 kHz, 100 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base

3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

- 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 (AttitudeEngineTM) 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 gyro-scopes, 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.

Sensor fusion performance

Sensor rusion periormanee	
Roll, Pitch	0.5 deg RMS
Yaw/Heading	1.5 deg RMS
Strapdown Integration (SDI)	<1 m CEP
Velocity	0.05 m/s RMS
Gyroscope	
Standard full range	2000 deg/s
In-run bias stability	10 deg/h
Bandwidth (-3dB)	255 Hz
Noise Density	0.007 º/s/√Hz
g-sensitivity (calibr.)	0.001 º/s/g
Accelerometer	
Standard full range	16 g
In-run bias stability	30 µg
Bandwidth (-3dB)	324 (x,y) 262
Noise Density	120 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	Yes (UART)
GNSS precision	Standard
RTCM input port	n/a
Barometer	
Barometer interface	Yes (BMP280)



Mechanical	
IP-rating	IP00
Operating Temperature	-40 to 85 °C
Casing material	PCB
Mounting orientation	No restriction, full 360° 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
Electrical	
Input voltage	2.19 to 3.6V
Power consumption (typ)	<100 mW @ 3V
Interfaces / IO	
Interfaces	UART, SPI, I ² C
Sync Options	Yes
Protocols	Xbus, NMEAin
Clock drift	1 ppm
Output Frequency	Up to 1 kHz, 100 Hz SDI
Built-in-self test	Yes
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	 BASE by XSENS: online manuals,
	community and knowledge base

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



(z) Hz

- Xsens' high-performance product line
- Market leading 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.

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.



Accelerometer Calibrated	
Chrondown Integration (CDI)	
Strapdown Integration (SDI) Yes	
Gyroscope	
Standard full range450 deg/sIn-run bias stability10 deg/hBandwidth (-3dB)415 HzNoise Density0.01 °/s/√Hzg-sensitivity (calibr.)0.003 °/s/g	
Accelerometer	
Standard full range20 gIn-run bias stability15 µgBandwidth (-3dB)375 HzNoise Density60 µg/√Hz	
Magnetometer	
Standard full range+/- 8 GTotal RMS noise0.5 mGNon-linearity0.2%Resolution0.25 mG	
GNSS Receiver	
Brand n/a Model n/a 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 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	55 g
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
Clock drift	10 ppm (or external)
Output Frequency	up to 2kHz
Built-in-self test	Yes
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	BASE by XSENS: online manuals, community and knowledge base

White label and OEM integration options available

3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

- Xsens' 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.

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.



Sensor fusion performance	e	Mechanical	
Roll, Pitch Yaw/Heading Strapdown Integration (SDI) Gyroscope Standard full range In-run bias stability Bandwidth (-3dB)	 0.2 deg RMS unreferenced, low drift Yes 450 deg/s 10 deg/h 415 Hz 	IP-rating Operating Temperature Casing material Mounting orientation Dimensions Connector Weight	IP67 40 t Alum No r 57x4 Fisch 55 g
Noise Density g-sensitivity (calibr.) Accelerometer	0.01 °/s/√Hz 0.003 °/s/g	Electrical Input voltage Power consumption (typ) —	3V3, 520
Standard full range In-run bias stability Bandwidth (-3dB) Noise Density Magnetometer Standard full range	 20 g 15 µg 375 Hz 60 µg/√Hz +/- 8 G 	Interfaces / IO Interfaces Sync Options Protocols Clock drift Output Frequency Built in colf test	USB, Sync Xbus 10 p up to
Iotal RMS noise Non-linearity Resolution	0.5 mG 0.2% 0.25 mG	Software Suite GUI (Windows/Linux)	MT M
GNSS Receiver Brand Model RTCM input port Barometer	n/a n/a n/a	SDK (Example code)	Magr C++ publi LabV BASI
Standard full range Total RMS noise Resolution	 300-1100 hPa 3.6 Pa ~0.08m 	• White label and OEM	integra

ure	-40 to 85 °C
	Aluminum
ı ———	No restriction, full 360° in all axes
	57x41.90x23.60 mm
	Fischer SV
	55 g
	3V3, 4.5V-34V
(typ) —	520 mW
D	
	USB, RS232, RS422, UART
	SyncIn, SyncOut, ClockSync
	Xbus, ASCII (NMEA)
	10 ppm (or external)
	up to 2kHz

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	BASE by XSENS: online manuals,
	community and knowledge base

- gration options available
- 3D models available on request
- Available online via Digi-Key, Mouser, Farnell and local distributors





- Xsens' 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.

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.



Sensor fusion performance		Mechanical	
Roll, Pitch	0.2 deg RMS	IP-rating	IP67
Yaw/Heading	1 deg RMS	Operating Temperature	-40 to 85 °C
Strapdown Integration (SDI)	Yes	Casing material	Aluminum
Gyroscope		Mounting orientation	No restriction, full 360° in all axes
Standard full range	450 deg/s	Dimensions	57x41.90x23.60 mm
In-run bias stability	10 deg/h	Connector	Fischer SV
Bandwidth (-3dB)	415 Hz	Weight	55 g
Noise Density	0.01 º/s/√Hz	Electrical	
g-sensitivity (calibr.)	0.003 º/s/g	Input voltage	3V3, 4.5V-34V
Accelerometer		Power consumption (typ)	520 mW
Standard full range	20 g	Interfaces / IO	
In-run bias stability	15 µg	Interfaces	USB, RS232, RS422, UART
Bandwidth (-3dB)	375 Hz	Sync Options	SyncIn, SyncOut, ClockSync
Noise Density	60 µg/√Hz	Protocols	Xbus, ASCII (NMEA)
Magnetometer		Clock drift	10 ppm (or external)
Standard full range	+/- 8 G	Output Frequency	up to 2kHz
Total RMS noise	0.5 mG	Built-in-self test	Yes
Non-linearity	0.2%	Software Suite	
Resolution	0.25 mG	GUI (Windows/Linux)	MT Manager Firmware updater,
GNSS Receiver			Magnetic Field Mapper
Brand	n/a	SDK (Example code)	C++, C#, python, Matlab, Nucleo,
Model	n/a		public source code
RTCM input port	n/a	Drivers	LabVIEW, ROS, GO
Barometer		Support	BASE by XSENS: online manuals,
Standard full range	300-1100 hPa		community and knowledge base
Total RMS noise	3.6 Pa	. White label and OEM int	aration options available
Resolution	~0.08m	3D models available on it	request

• Available online via Digi-Key, Mouser, Farnell and local distributors



Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

- Small, IP 51 rated IMU
- Factory calibrated inertial data
- Full GUI and 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 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.



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 °/s/√Hz
g-sensitivity (calibr.)	0.001 °/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	n/a
Model	n/a
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	IP51	
Operating Temperature	-40 to 85 °C	
Casing material	PC-ABS	
Mounting orientation	No restriction, full 360° in all axes	
Dimensions	28x31.50x13 mm	
Connector	Main: Phoenix Contact 16 pin, 1.27 mm	
	pitch	
Weight	8.9 g	
Electrical		
Input voltage	4.5 to 24V	
Power consumption (typ)	<1 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	2 kHz, 400 Hz SDI	
Built-in-self test	Yes	
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	BASE by XSENS: online manuals,	
	community and knowledge base	
 white label and OEM integration options available 		

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



- Small, IP 51 rated IMU
- 0.2 deg roll/pitch accuracy
- Full GUI and SDK available

The MTi-620 is a Vertical Reference System with a small form-factor design for deep integration into your application. Building on the proven 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.



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 °/s/√Hz
g-sensitivity (calibr.)	0.001 º/s/g
Accelerometer	
Standard full range	10 g
In-run bias stability	10 (x,y) 15(z) μg
Bandwidth (-3dB)	500Hz
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	n/a
Model	n/a
RTCM input port	n/a
Barometer	
Standard full range	300-1250 hPa
Total RMS noise	1.2 Pa
Relative accuracy	+/- 8 Pa (~0.5m)

Maakaataat	
Mechanical	
IP-rating	IP51
Operating Temperature	-40 to 85 °C
Casing material	PC-ABS
Mounting orientation	No restriction, full 360° in all axes
Dimensions	28x31.50x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm
	pitch
Weight	8.9 g
Electrical	
Input voltage	4.5 to 24V
Power consumption (typ)	<1 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	2 kHz, 400 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base
White lead or Mintegration entions auditable	

White label and OEM integration options available

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



- Small, IP 51 rated IMU
- 0.2 deg roll/pitch, 1 deg heading accuracy
- Full GUI and 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 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.



Sensor Fusion Performance		Me
Roll, Pitch	0,2 deg RMS	IP-r
Yaw/Heading	1 deg RMS	Ope
Strapdown Integration (SDI)	Yes	Cas
Gyroscope		Mou
Standard full range	2000 deg/s	Dim
In-run bias stability	8 deg/h	Con
Bandwidth (-3dB)	520 Hz	
Noise Density	0.007 °/s/√Hz	Wei
g-sensitivity (calibr.)	0.001 °/s/g	Ele
Accelerometer		Inpu
Standard full range	10 g	Pow
In-run bias stability	10 (x,y) 15(z) μg	Int
Bandwidth (-3dB)	500Hz	Inte
Noise Density	60 µg/√Hz	Syn
Magnetometer		Prot
Standard full range	+/- 8 G	Cloc
Total RMS noise	1 mG	Out
Non-linearity	0.2%	Buil
Resolution	0.25 mG	So
GNSS Receiver		GUI
Brand	n/a	
Model	n/a	SDK
RTCM input port	n/a	Durin
Barometer		Sup
Standard full range	300-1250 hPa	P
Total RMS noise	1.2 Pa	
Relative accuracy	+/- 8 Pa (~0.5m)	• V

Mechanical	
IP-rating	IP51
Operating Temperature	-40 to 85 °C
Casing material	PC-ABS
Mounting orientation	No restriction, full 360° in all axes
Dimensions	28x31.50x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm
Weight	8 9 a
weight	0.9 g
Electrical	
Input voltage	4.5 to 24V
Power consumption (typ)	<1 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	2 kHz, 400 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base

• White label and OEM integration options available

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

- Small, IP52 rated GNSS/INS
- 0.2 deg roll/pitch & sub-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 application. Building on the proven MTi 600-series technology it enables a robust and easy to use sub-meter level positioning and orientation tracking. If features a 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.



Sensor Fusion Performar	nce	Me
Roll, Pitch	0,2 deg RMS	IP-r
Yaw/Heading	0.8 deg RMS	Ope
Position	<1m CEP	Casi
Velocity	0.05m/s RMS	Mou
Gyroscope		Dim
Standard full range	2000 deg/s	Con
In-run bias stability	8 deg/h	
Bandwidth (-3dB)	520 Hz	Wei
Noise Density	0.007 º/s/√Hz	Ele
g-sensitivity (calibr.)	0.001 º/s/g	Inpu
Accelerometer		Pow
Standard full range	10 g	Inf
In-run bias stability	10 (x,y) 15(z) μg	Inte
Bandwidth (-3dB)	500 Hz	Svn
Noise Density	60 µg/√Hz	Prot
Magnetometer		Cloc
Standard full range	+/- 8 G	Out
Total RMS noise	1 mG	Buil
Non-linearity	0.2%	50
Resolution	0.25 mG	GUI
GNSS Receiver		GOI
Brand	External	SDK
Model		
RTCM input port		Driv
	External	Sup
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 °C
Casing material	PC-ABS
Mounting orientation	No restriction, full 360° in all axes
Dimensions	28x31.50x13 mm
Connector	Main: Phoenix Contact 16 pin, 1.27 mm pitch
Weight	8.9 g
Electrical	
Input voltage	4.5 to 24V
Power consumption (typ)	<1 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	2 kHz, 400 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base
. White lebel and OFM int	equation options published

White label and OEM integration options available

• 3D models available on request

 Available online via Digi-Key, Mouser, Farnell and local distributors



MTi-680G

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

The MTi-680G is an RTK enabled GNSS/INS with a rugged housing featuring IP68 protection against environmental influences. Building on the proven MTi 600-series technology it enables a robust and easy to use cm-level positioning and orientation tracking. If features an 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.

Sensor Fusion Performance

Roll, Pitch	0,2 deg RMS
Yaw/Heading	0.5 deg RMS
Position	1cm CEP
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.)	0.001 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	RTCM 3.3, RS232
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 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° 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
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	1ppm
Output Frequency	2 kHz, 400 Hz SDI
Built-in-self test	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base

• White label and OEM integration options available

• 3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



MTi-G-710

- Xsens' 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. 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.



Sensor fusion performance		м
Roll, Pitch	0.2 deg RMS	IP
Yaw/Heading	0.8 deg RMS	Op
Strapdown Integration (SDI)	1.0 m (1σSTD)	Ca
Velocity	0.05 m/s (1σSTD)	Mc
Gyroscope		Dii
Standard full range	450 deg/s	Co
In-run bias stability	10 deg/h	We
Bandwidth (-3dB)	415 Hz	EI
Noise Density	0.01 º/s/√Hz	In
g-sensitivity (calibr.)	0.003 °/s/g	Ро
Accelerometer		Ir
Standard full range	20 g	Int
In-run bias stability	15 µg	Sy
Bandwidth (-3dB)	375 Hz	Pro
Noise Density	60 µg/√Hz	Clo
Magnetometer		Ou
Standard full range	+/- 8 G	Bu
Total RMS noise	0.5 mG	S
Non-linearity	0.2%	GL
Resolution	0.25 mG	
GNSS Receiver		SD
Brand	u-blox	
Model	MAX-M8	Dr
RTCM input port	n/a	Su
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 °C
Casing material	Aluminum
Mounting orientation	No restriction, full 360° in all axes
Dimensions	57x41.90x23.60 mm
Connector	Fischer SV
Weight	58 g
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	Yes
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	BASE by XSENS: online manuals,
	community and knowledge base

White label and OEM integration options available

3D models available on request

• Available online via Digi-Key, Mouser, Farnell and local distributors



Unless stated otherwise, all specifications are typical. Specifications subject to change without notice.

