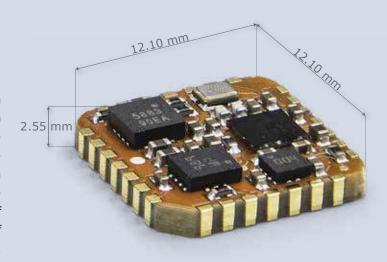
## MTi-7

- Smallest form factor on the market
- Easy integration
- Development Kit available

The MTi-7 is the smallest self-contained GNSS/INS on the market. The Xsens optimized strapdown algorithm (AttitudeEngine $^{\text{TM}}$ ) performs high-speed, dead-reckoning calculations at 1 kHz, accurately capturing high-frequency motions. Xsens' industry-leading sensor fusion algorithm provides high accuracy and sensor auto-calibration in this cost-effective module for a wide range of (embedded) applications. It relieves you of the work of designing, integrating and maintaining gyroscopes, accelerometers and other sensors.

The MTi-7 is part of the MTi 1-series supported by the MT Software Suite, which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.



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

Sensor fusion performance	
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 °/s/√Hz
g-sensitivity (calibr.)	0.001 °/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	Yes (UART)
GNSS precision	Standard
RTCM input port	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)	<100 mW @ 3V		

Interfaces / IO			
Interfaces	UART, SPI, I <sup>2</sup> C		
Sync Options	Yes		
Protocols	Xbus, NMEAin		
Clock drift	1 ppm		
Output Frequency	up to 2kHz		
Built-in-self test	Yes		
C - (1 C			

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	



**Barometer**Barometer interface



Yes (BMP280)