

Xsens MTi-610R

- > Rugged, IP 68 rated IMU
- > Factory calibrated inertial data
- > Full GUI and SDK available



Description

The MTi-610R is an Inertial Measurement Unit with a rugged housing featuring IP68 protection against environmental influences. 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-610R 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 °/s/√Hz
g-sensitivity (calibr.)	_____	0.1 °/s/g

Accelerometer

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

Mechanical

IP-rating	_____	IP68
Operating Temperature	_____	-40 to 85 °C
Casing material	_____	Aluminum
Mounting orientation	_____	No restriction, full 360° 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