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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