MTi-320

- **Small, IP51-rated AHT**
- **0.5 deg roll/pitch accuracy**
- **Full graphical user interface (GUI) and Starter Kit (SK) available**

The MTi-320 is a high-performing Active Heading Tracker (AHT) with a small form factor design for deep integration in your application.

The Xsens optimized strapdown algorithm (AttitudeEngine™) 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.

The MTi-320 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.

31.5 mm
13 mm
28 mm

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

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

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Mechanical

IP-rating	IP51
Operating Temperature	-40 to 85 ºC
Casing material	PC-ABS
Mounting orientation	No restriction, full 360º in all axes
Dimensions	28x31.50x13 mm
Connector	8-pin Molex Micro-Lock 26-30 AWG
Weight	9 g
Certifications	CE, FCC, RoHS

Electrical

Input voltage	4.5 to 24V
Power consumption (typ)	300 mW

Interfaces / IO

Interfaces	RS232
Sync Options	Yes
Protocols	Xbus
Clock drift	10 ppm
Output Frequency	up to 1kHz, 100 Hz SDI
Built-in-self test	Gyr, Acc, Mag

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
Bandwidth (-3dB)	230 Hz

Accelerometer

Standard full range	16 g
Bandwidth (-3dB)	230 Hz

Magnetometer

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

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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