Xsens
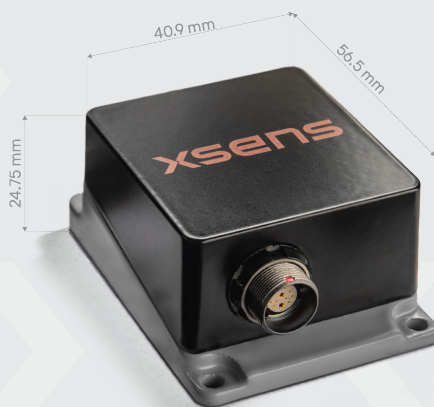# Sirius IMU

> Achieve new levels of accuracy with high-quality calibrated IMU data
> Vibration- and shock- resistant signal pipeline
> Rugged and military standard certified
> Flexible interfaces and protocols for seamless integration

Description

The Xsens Sirius IMU features vibration- and shock-resistant signal pipeline and offers high-quality calibrated inertial data, even in extreme vibration conditions.

With Xsens technology inside, the all-in-one sensor system supports optimized temperature calibration, high frequency output, robustness against magnetic disturbances, and has configurable output settings for synchronization with any third-party device.

The Xsens Sirius IMU is supported by the MT Software Suite which includes MT Manager (GUI for Windows/Linux), SDK, example codes and drivers for many platforms.

> White label options available
> 3D models available on request

Sensor fusion performance

Accelerometer	Calibrated
Gyroscope	Calibrated
Strapdown Integration (SDI)	Yes

Gyroscope

Standard full range	± 300 °/s
In-run bias stability	7 °/h
Bandwidth (-3dB)	400 Hz
Noise Density	0.003 °/s/√Hz
g-sensitivity (calibr.)	0.08 °/s/g

Accelerometer

Standard full range	± 8 g
In-run bias stability	15 µg
Bandwidth (-3dB)	470 Hz
Noise Density	15 µg/√Hz

Magnetometer

Standard full range	± 8 G
Total RMS noise	1 mG
Non-linearity	0.2%
Resolution	0.25 mG

Mechanical

IP-rating	IP68
Operating Temperature	-40 to +85 °C
Casing material	Aluminum

Mounting orientation	No restriction, full 360° in all axes
Dimensions	56.50 x 40.90 x 24.75 mm
Connector	Main: ODU (AMC HD 12 pins)
Weight	78.5 grams
Certifications	CE, FCC, RoHS, MIL-STD-202, ITAR free

Electrical

Input voltage	4.5V-24V
Power consumption (typ)	<1W

Interfaces / IO

Interfaces	RS232, RS422, CAN
Sync Options	SyncIn, SyncOut, ClockSync
Protocols	Xbus, ASCII (NMEA), CAN
Clock drift	10 ppm (or external)
Output Frequency	Up to 2kHz, 400Hz SDI
Built-in-self test	Gyr, Acc, Mag

Software Suite

GUI (Windows/Linux)	MT Manager, Firmware updater, Magnetic Field Mapper
SDK (Example code)	C++, C#, Python, Matlab, Public source code
Drivers	LabVIEW, ROS, GO
Support	Online manuals, community and knowledge base