

Gyro Sensor

SPECIAL FEATURES

- shield board including
- Arduino header compatible shield board
- Easy to use connection (micro USB), access to I C/SPI/UART
- Arduino header compatible shield board
- Full functionality and pin configuration
- Intuitive
- SDK with drivers and embedded software examples



Miniature aerial vehicles

- Delivery drones
- Video drones
- Agricultural UAVs



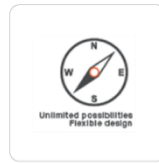
Machinery

- Satcom on the Move (SoTM)
- Construction machinery
- Ship monitoring



Robotics

- Autonomous agriculture
- Warehouse automation
- Robotic arms



Other applications

- Handheld devices
- Pedestrian navigation
- VR/AR and HMDs
- Navigation aiding

Ordering Information

Output	Packing Method
IMU; inertial data	Tray (containing 20 modules)
VRU; inertial data, roll/pitch, heading tracking	Tray (containing 20 modules)
AHRS; inertial data, roll/pitch/yaw	Tray (containing 20 modules)
	Reels available form 250 units
Development kit for	Development kit for

Ordering Accuracy

Roll/Pitch (Static)	0.5°1 RMS
Roll/Pitch (Dynamic)	0.8°1 RMS
Yaw (Dynamic)	2°1 RMS

Interfacing

Hardware Interface	I ² C, SPI, UART (selectable)
Output data rate	0-800Hz
Software Interface	Xsens Xbus binary protocol Driver source code supplied

Inertial Sensor Performance

Gyroscope full-scale range	$\pm 2000^{\circ}/s$	Accelerometer full-scale range	$\pm 16g$
Gyroscope bias stability	10 deg/hr	Accelerometer bias stability	0.03mg
Gyroscope noise density	0.007 $^{\circ}/s/\text{Hz}$	Accelerometer noise density	120ug/Hz
Gyroscope non-linearity	0.1% FS	Accelerometer non-linearity	0.5% FS

System Specifications

Power consumption	44mW @ 3V	Weight	<1g
Input voltage	2.19 to 3.6V	Packaging	Tray (20 Modules) Reel (250 Modules)
Size	12.1 X 12.1 X 2.55 mm		

Tray Packaging Information

Tray packaging information

THR Label
Standard Intermediate Box

Y-Pitch
X-Pitch
Detail "A"
Device Pin 1
Orientation in Tray
Z-Pitch
Pin 1
Detail "A"

TNR LABEL

Tray Dimensions (mm)						Tray packaging information		Pin 1
Length "X"	Width "Y"	Height "Z"	Pocket X-Pitch	Pocket Y-Pitch	Pocket X-Y Array	Qty/Tray	Qty/Box	
322.60	135.90	7.62	14.65	16.00	12 x 12	20 units	20 units	Detail "A" Marking

- NOTES:
- All dimensions are in millimeters.
 - Pictured tray representative only, actual tray may look different.
 - The hardware version number is labeled SPEC REV on the TNR Label.