MARS ROBOTICS مارس روبوتکـس

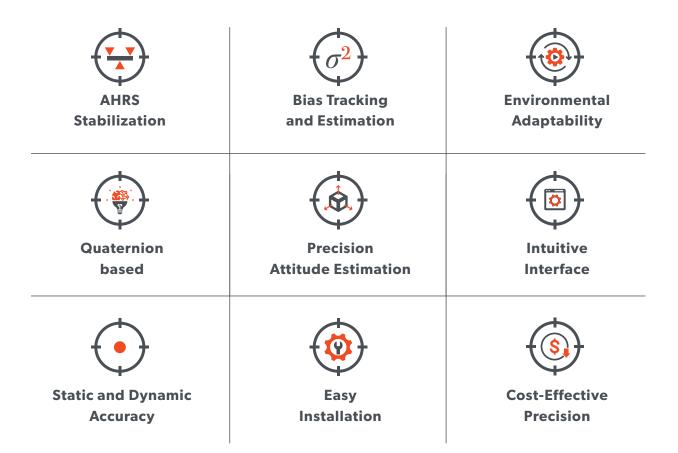
PRODUCT DATA SHEET

MARSNAV AHRS 100



OVERVIEW:

MARSNAV-AHRS 100 is a compact, cost-effective navigation solution based on an Adaptive Extended Kalman Filter (AEKF) algorithm, delivering precise roll, pitch, and heading data for accurate attitude determination under 200 Hz update rate. Built with an industrial-grade sensor (9-DOF), it ensures robust performance and stabilization in dynamic land, marine, and aerospace environments.



Email: info@marsrobotic.com

Fax: +962 27102044 Phone: +962 27102026 Address: Wasfi Al Tal Street, P.O Box 2233, Irbid 21163, Jordan

MARSNAV AHRS 100 CAPABILITIES:

- Bias Estimation & Tracking
- Adaptive Noise Modeling
- Real-Time Stabilization

- Compact and Scalable
- Stay level and precise

SPECIFICATIONS:

Orientation Performance

Pitch/Roll (Static)	0.5 deg RMS
Pitch/Roll (Dynamic)	0.5 deg RMS
Yaw (Static)	1 deg RMS
Yaw (Dynamic)	1 deg RMS

Accelerometer Specifications

Measurement Range	User selectable ±2.5g & ±10g
Resolution	0.079mg (2.5g) / 0.313mg (10g
Linearity	0.1%
Operating Temperature	-40 to +125 °C
Noise	1mg

Gyroscope Specifications

Measurement Range	User selectable ±150°/s & ±300°/s
Resolution	0.005°/s (±150°/s) / 0.01°/s (±300°/s)
Linearity	0.1%
Operating Temperature	-40 to +125 °C
Noise	0.06°/s

Magnetometer Specifications

Measurement Range	-800 to +800 μT
Resolution	13 nT
Linearity	0.5% over 200 μT
Operating Temperature	-40 to +85 °C
Noise	20 nT

Board Specifications

Input Voltage	3.3 – 20 V
Dimensions (mm, H x W x L)	OEM: 1.63 x 40 x 50 Boxed: 25 x 45 x 68
Weight	50 g
Hardware Interface	RS232 (up to 250kbps)
Operating Temperature	-40 to +85 °C
Output Data Rate	Up to 200Hz

Software Suite

MARS Navigator v1.0

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