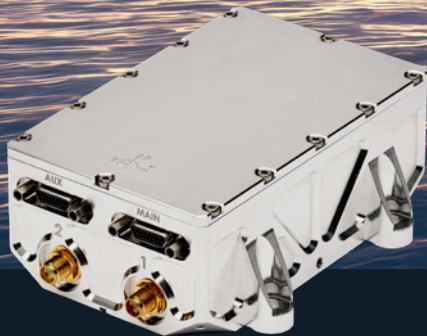


STELLAR-40 MARINE

Tactical-Grade Inertial Navigation System

NEW

MADE IN FRANCE



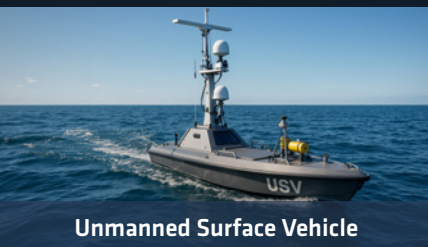
High-Performance Navigation Solution Electronic Warfare Ready



ITAR free



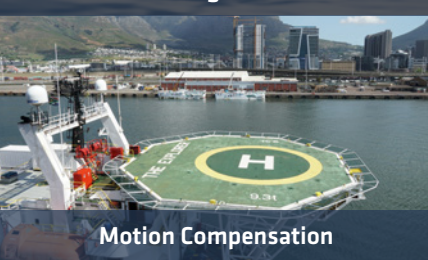
2-year
Warranty



Unmanned Surface Vehicle



Navigation



Motion Compensation

Stellar-40 combines a tactical-grade IMU with an all-in-view jamming and spoofing resilient. GNSS receiver, all integrated in a robust mechanical design. The hardware is powered by the SAF2Nav engine making it the perfect solution for reliable navigation in GNSS-challenged marine environments.



Auto-adjusting
heave



Autonomous navigation in
GNSS-denied environment



Advanced Jamming & Spoofing
detection & mitigation



Multi-sensor
fusion

Resilient navigation
designed for scalability



CRPA
compatibility

ARDUPILOT
ROS2 PX4

Compatible drivers



Embedded vibration
spectral analysis



Built-in
magnetometers

SYSTEM PERFORMANCE *1-sigma over the full temperature range*

Marine transit Long straight lines 		Dynamics marine Survey patterns 
Heading	0.06° (dual antenna GNSS)	
Roll / Pitch	0.02° (GNSS)	0.015° (RTK GNSS)
Horizontal position	1.2 m (GNSS)	
Vertical position	1.5 m (GNSS)	
Dead reckoning	0.4 % Distance travelled	0.25 % Distance travelled
Heave	5 cm or 5 % of swell	

INTERFACES

Protocols	NMEA, sbgECom (binary), REST API, third party protocols
Output rate	200 Hz (IMU & INS)
Datalogger	8 GB or 48 h @ 200 Hz
Main interface	1x Ethernet full duplex - Web interface, FTP, PTP / NTP, NTRIP
Other interfaces	Serial (RS232/RS422), CAN 2.0 A/B, sync I/O (RS232 & TTL)
Connectors	2x Micro-D 15 (I/O) 2x SMA connectors (antennas)

OPERATING CONDITIONS

Input voltage	9 - 36 VDC
Power consumption	3 W without antennas
Operating temperature	- 40 to 71°C
IMU range	± 40 g; ± 490°/s

MECHANICAL SPECIFICATIONS

Weight	365 g
Dimensions (LxWxH)	107.7 x 85 x 70 mm

QUALIFICATIONS

Vibrations & shocks	MIL-STD-810H
EMC	MIL-STD-461 & MIL-STD-1275

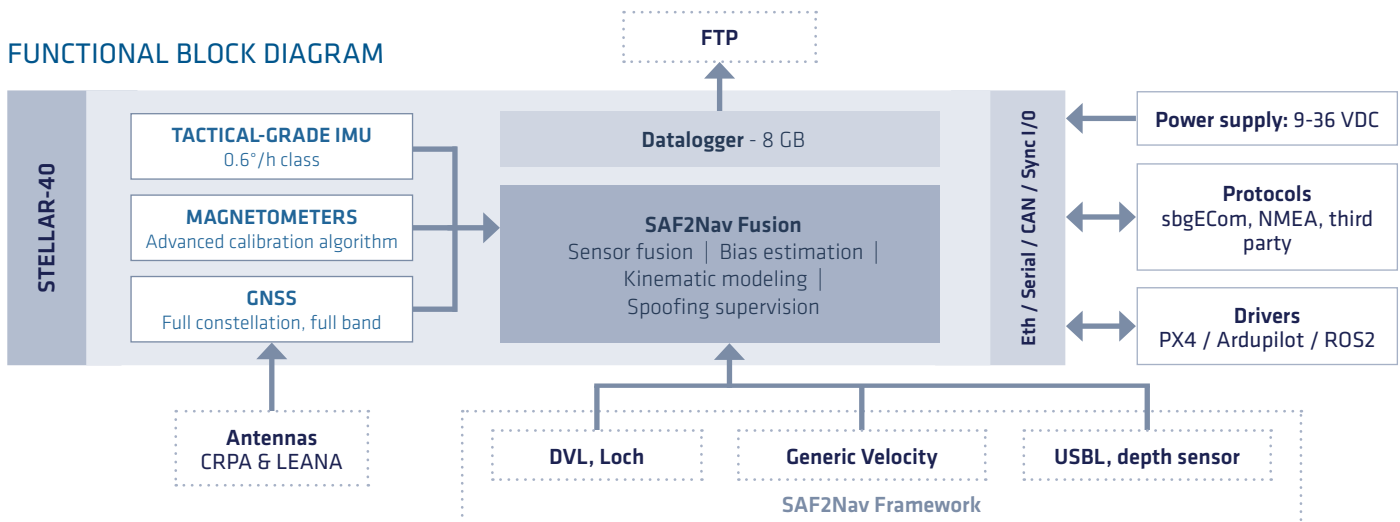
GNSS *Septentrio Mosaic*

Frequencies	Full band, all signals in view tracking
Constellations	GPS / Beidou / GLONASS / Galileo / QZSS / NavIC
Time to first fix	< 35 s (cold start)
Jamming/Spoofing	Automatic anti-jamming & anti-spoofing detection OSNMA

MECHANICAL OPTIONS

Stellar-40 Marine 	
IMU-level damping	✓
Rugged enclosure	✓
External isolation	⊗
Recommended applications	General applications

FUNCTIONAL BLOCK DIAGRAM



Expert Technical Support

Lifetime Firmware Updates

2-year Warranty

