

Rovins Nano

Compact and cost effective
inertial navigation system
for ROV navigation

Rovins Nano merges the established high-grade iXblue inertial navigation system with our competitive IMU. It is built on iXblue's renowned FOG truly solid state technology and offshore instrumentation expertise. Rovins Nano offers the unbeatable stability and accuracy of the inertial position while simplifying the operation with its automatic and autonomous external sensor management. Rovins Nano is the ROV navigation solution you can rely on, bringing an additional level of safety in case of deficient aiding sensors.



FEATURES

- Full INS and a gyrocompass
- True north, roll & pitch, rotation rates
- DVL & Depth sensor available as options
- Optimized interface with RAMSES for added horsepower
- Web GUI and legacy serial control commands
- Stand-alone, small and light weight

APPLICATIONS

- ROV OP & Navigation
- IRM
- MWSK
- Survey
- Dredging

BENEFITS

- Inertial position & velocity, available without DVL
- Open architecture; for all 3rd party sensors brands: DVL, USBL, LBL, Depth sensor ...
- Sparse Array enhancement to your existing LBL network
- Equivalent interfacing to ROVINS, PHINS, OCTANS
- ITAR-free, fast export under O&G regulations
- Cost effective: better ROI, lower TCO

TECHNICAL SPECIFICATIONS

Performance / Characteristics

Position accuracy ⁽¹⁾⁽²⁾	
Navigation with DVL	0.5%TD
Station Keeping With Acoustic	Three times better
Station Keeping With DVL	<1 m/hours
Station Keeping Stand Alone [60 sec]	<1 m
Inertial 30 velocities	Available with or without DVL or acoustics or Sparse Array
Heading dynamic accuracy ⁽³⁾⁽⁴⁾ Stand Alone / with DVL / USBL / ...	0.5 deg
Roll & Pitch dynamic accuracy ⁽⁵⁾	0.1 deg
Settling time	15 minutes
Resolution	0.01 deg

Operating range / Environment

Operating / storage temperature	-20 to 55°C/-40 to 80°C
Rotation rate dynamic range	Up to 250° /Sec
Acceleration dynamic range	+/-5g
Heading /roll/ pitch ranges	0° - 360°/± 180°/± 90°
MTBF	100,000 hours
Robust to harsh environment, shock and vibration proof	

Physical Characteristics

Depth rating	4,000 m
Dimensions (φ x H)	178 x 237 mm [7.01 x 9.33 in]
Weight in air /water	10 Kg/6 Kg [23lbs/12 lbs)
Material	Titanium
Connectors	1x SEACON NINM-26#22, 3x SEACON NINM-12#22

Interfaces

Ethernet	100 Mbits, UDP/TCP client/server/web server [GUI]
Serial RS232 / 422	5 inputs/5 outputs independent ports/ 1 config. port
Pulse port	1 input for PPS
Input/ output format	Industry standards: NMEA0183, ASCII, BINARY
Data output rate	Up to 200 Hz
Power supply / consumption ⁽⁵⁾	24 VDC/< 12 W
Embedded power lines for ext. sensors · Compatible with GFD systems	

(1) CEP, 50% Circular Error Probability. (2) Typical performances, dependent on external sensor characteristics. (3) RMS Values. (4) Secant Latitude= 1 /Cosine Latitude. (5) ROVINS' own power consumption, not taking into account external sensors consumption, typical value @24V and ambient temperature.