



# XPLORER 18-01

## Autonomous hydrographic survey vessel

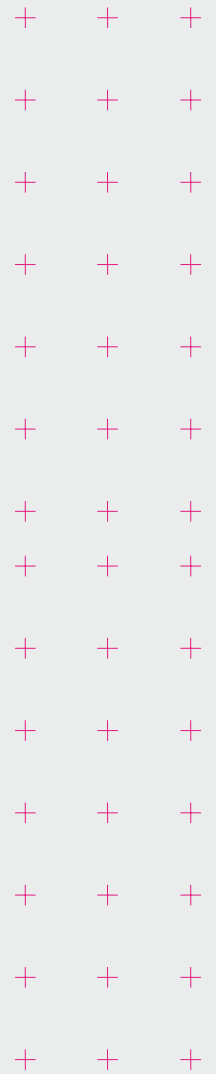


# With AI-driven remote acquisition and processing, it provides best-in-industry deliverables in shorter time frames.

Xplorer 18 is an autonomous, minimally crewed, hydrographic survey vessel that effortlessly supports near and offshore campaigns. Offering a new concept, Xplorer 18 has been built from the start to be completely uncrewed, yet retains the necessities to support a lean crew; efficient operations today supported by the technology of the future.

Whether working solo or paired with another vessel in the fleet, Xplorer 18 maximises efficiency with 10-day endurance, permanently fitted sensor spread and a gyroscopic stabiliser.

Mobilised with a dense, AI driven, remote computer cluster, Xplorer is its own floating data acquisition and processing powerhouse. Our internally developed AI pipelines speed up processing of critical survey datasets, on site, at the edge, to shorten delivery timeframes.





## General

CONSTRUCTION MATERIAL	Marine Grade Aluminium Alloy
HULL TYPE	Symmetric semi-planning monohull
SUPERSTRUCTURE MOUNTING	Integral to Hull
CLASSIFICATION	BV Hull • Machinery - Light Ship - Special Service Craft - Sea Area 3
FLAG	UK Flag

## Propulsion

MAIN ENGINES	2x Volvo Penta IPS 9000 Tier 3
IMO	IMO tier 3 - SCR Exhaust
CARBON FOOTPRINT	Aftertreatment Technology
INSTALLED POWER	Carbon Neutral Vessel operations
SPRINT SPEED	1030 KW
VESSEL STATION KEEPING	21 Kts
SERVICE SPEED	Dynamic Positioning System Installed

## Electrical Equipment

NETWORK	24v DC, 400/230V 50Hz AC
GENERATOR SETS	1x NANNI QLS 65T 52 KW 1x NANNI QLS 32T 24 KW

## Accommodation

MAIN DECK	2 KPM Crew seats / 2 twin cabins
BELOW DECK	Mess Seating, Table & Galley Shower Compartment
AIR CONDITIONING	Toshiba Air Cooled
HEATING	Reverse Cycle System

## Dimensions

LENGTH	18 m
BEAM	6,2 m
DRAFT	1,2 m
MAXIMUM DISPLACEMENT	40 T
MOULDED DEPTH	18 m
DEADWEIGHT	17 T
CARGO AREA	50 m <sup>2</sup>
DECK LOAD	1.5 T / m <sup>2</sup>
CREW	4 crew + 2 passengers

## Fire Fighting

ENGINE SPACE	STAT-X
LOOSE EXTINGUISHERS	In line with class requirements

## Deck Equipment

ANCHOR	1x SHHP Pool Type
ANCHOR WINCH	Lewmar Electric
SIDE FENDER	Manuplas Foam Fender
ROV/AUV	Rovco Autonomous Underwater Vehicles

## Ride Control & Comfort

ROLL REDUCTION	SMART Gyro SG80
TRIM CONTROL	Humphree Interceptors





## Tank Capacities

MARINE GAS OIL	5 m <sup>3</sup> (expandable)
FRESH WATER	0,25 m <sup>3</sup>
GREY WATER	0,25 m <sup>3</sup>
CLASSIFICATION	2,6 m <sup>3</sup>
BALLAST WATER	2,6 m <sup>3</sup>

## Additional Equipment

CCTV	8 Hikvision IP Cameras Hikvision 16 Channel NVR
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## Navigation and Communication

MAIN RADAR	Furuno FAR2218BB 12 kw Furuno MU190 19-inch Display
MAIN ELECTRONIC CHART	Furuno FMD3100 24-inch ECDIS
AIS	Furuno FA170
ECHO SOUNDER	Furuno FE800
NAVTEX	Furuno NX700B
GPS	Furuno GPS170
SPEED LOG	Walker 7070
WEATHER STATION	Airmar 2000WX/ RD33
INTERCOM	Phonic 3100 Master / Slaves

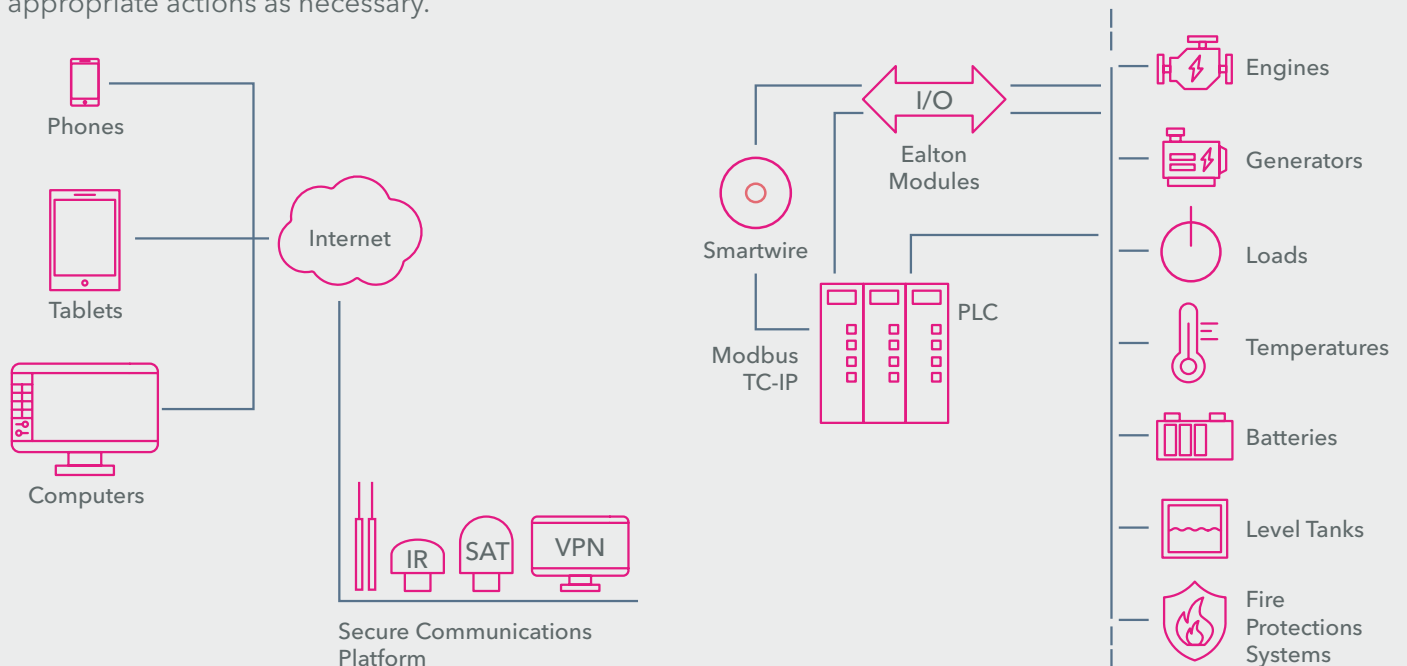
## Ship to Shore Communications

PRIMARY COMMUNICATIONS	4/5 G
BACK UP COMMUNICATIONS	Satellite
SECONDARY BACK UP COMMUNICATIONS	Iridium
CREW TO SHORE	VHF/UHF
VESSEL LOCATION	AIS



## Vessel Remote Monitoring System

Xplorer uses the Bluewave Remote Alarm System to monitor the performance of vessel critical components such as engines and generators. Remote operators continually monitor equipment status reports as well as alarm conditions. The remote monitoring system allows operators to interrogate alarm conditions and take appropriate actions as necessary.





# Remote Piloting/Autonomous Systems Hardware

## Remote Piloting Hardware

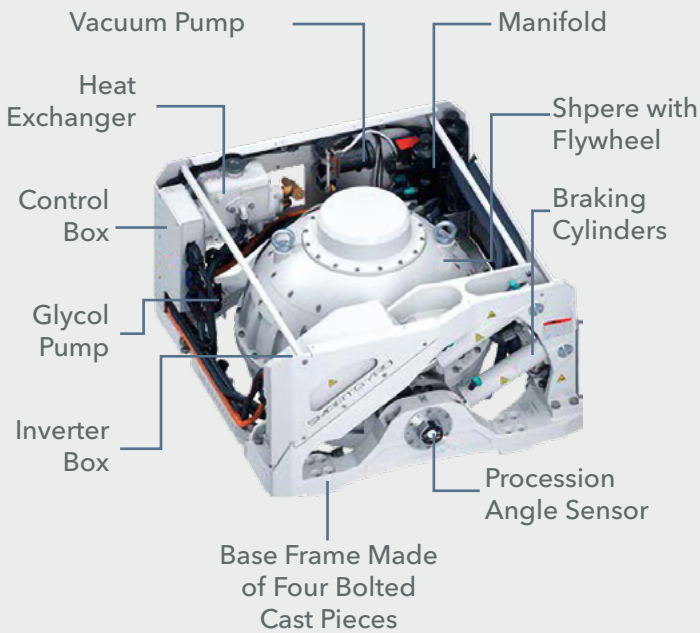
SENSOR TELEMETRY	GSM/LoRa/WIFI Comms	COMMUNICATIONS	Varipos PW7720 Receiver
VESSEL HEADING	LSS AME30 Heading Sensor	WEATHER STATION	Maximet 500 Wind Speed Ouster OS1-128 Gen2
RADAR	Furuno DRS4D NXT Radome	THERMAL CAMERAS	Ouster OS1-128 Gen2 LIDAR
NAVIGATION CONTROLS	Furuno FE800	LIDAR	4 FLIR Boson 640 60Hz Cameras
MARINE ANTENNA	Furuno MFD TZT9F	FIELD OF VIEW CAMERA	FOV 90 Degree Camera

## Enhanced Vessel Stabilization

A Smartgyro stabilizer has been added to minimize unwanted vessel movement and greatly enhance vessel stability. The adoption of the gyro stabilizer enhances the launch and recovery parameters for Aquanaut as well as providing additional crew comfort in rough seas.

### SG80 GYRO STABILIZER

Smartgyro SG80 is the gyro stabilizer of choice for boats from 60-70 ft. Ideal for both new builds and refit installations, the stabilizer can be fully serviced on-board the vessel without the need to lift out for maintenance, ensuring significant time and cost savings.



## Technical Specifications

RATED SPEED	5.500 RPM
ANGULAR MOMENTUM AT RATED SPEED	15,400 Nms
ANTI-ROLLING TORQUE AT RATED SPEED	3-,100 Nm
SPOOL UP - TIME TO RATED SPEED	45 minutes
SPOOL UP - TIME TO STABILIZATION	25 minutes
INPUT VOLTAGE (DC):	24 Vdc 50/60 Hz, single phase
SPOOL UP AC POWER	4.9 KW
OPERATING AC POWER	2.4-4.0 KW
DC POWER	220 W
SEA WATER SUPPLY	15 (min) - 30 (max) LPM 4 (min) - 8 (max) GPM
OPERATING TEMPERATURES	0° - 60° C (32° - 140°F)
ENVELOPE DIMENSIONS	1.08 x 1.11 x 0.87 m 42.4 x 43.7 x 34.3 in
NOISE OUTPUT	62-64 dBC @ 1 meter

