

## SOLUS-XR

### [XL-Range]

AUTONOMOUS  
UNDERWATER  
VEHICLE

Solus-XR is Cellula's next generation, fuel cell powered extra-large uncrewed underwater vehicle (XLUUV) designed for port to port, lightly supervised missions over long ranges.

Solus-XR is designed to be deployed solo or in fleets to provide a persistent at-sea capability with inter-vehicle communications and adaptive missions.

Solus-XR is built using an ultra-reliable and cost effective commercial AUV survey core architecture, with the ability to carry defence or commercial payloads in its large removable payload modules.

## About Us

Cellula Robotics Ltd. is a proudly Canadian, privately owned, world leading marine technology company specializing in turnkey design and production of subsea robotic systems.

Headquartered in Burnaby, British Columbia, Cellula employs 70 staff with a dedicated team of highly skilled engineers, designers and technicians. Cellula's extensive experience in projects that require integrated mechanical, electrical, hydraulic and software elements in a subsea environment is evident in its wide client base spanning over the defence, mineral exploration and oil & gas sectors.

Cellula prides itself in having developed and implemented a rigorous ISO 9001:2015 Quality Management System that continues to meet and exceed client expectations.

## Contact Us

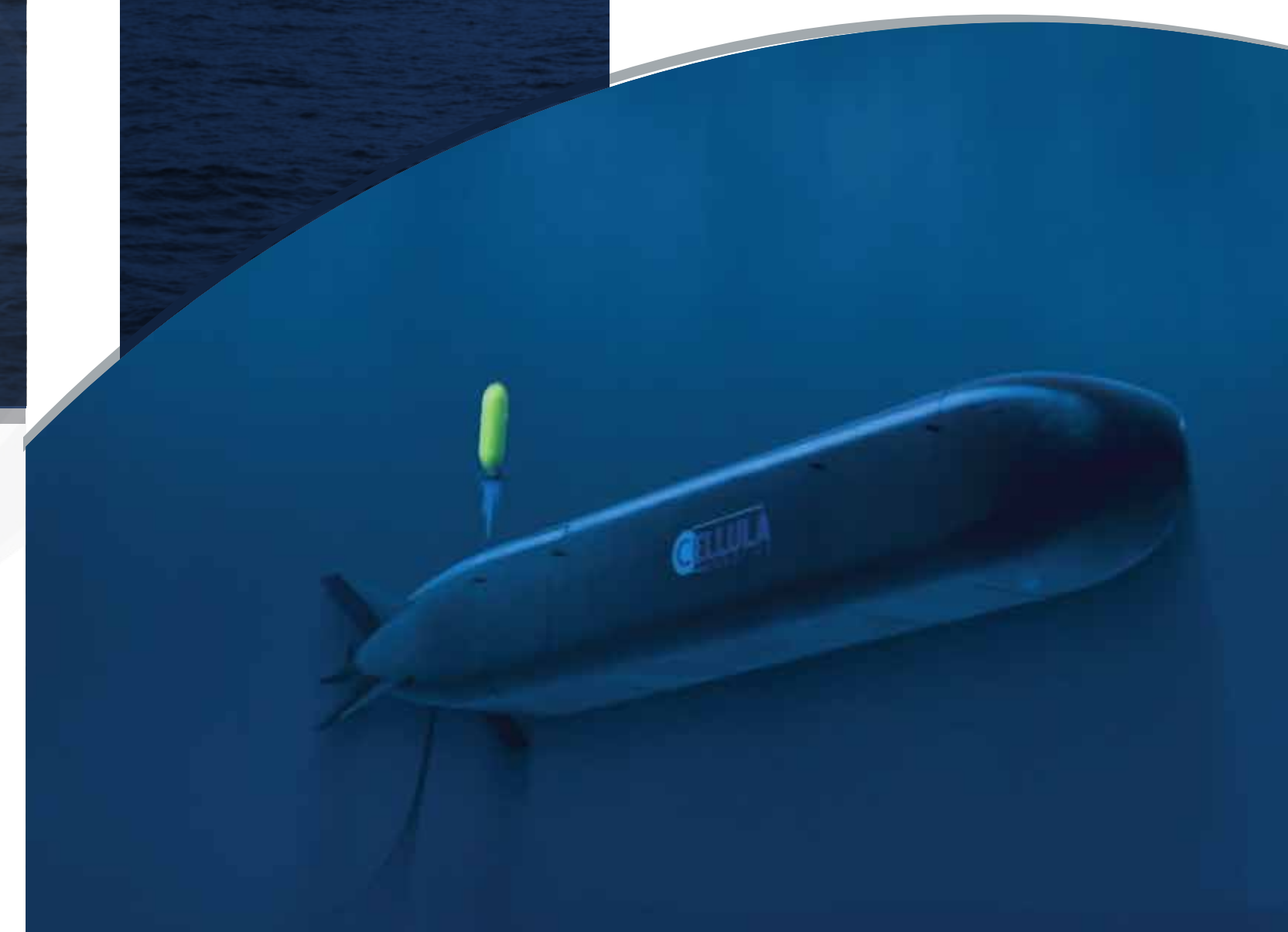
For inquiries about Solus-XR, please contact us:

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**Phone** 604-540-5530

**Email** [info@cellula.com](mailto:info@cellula.com)

- 5000 KM SUBMERGED RANGE
- TWO 2500 L REMOVABLE PAYLOAD MODULES
- LONG RANGE ACOUSTIC COMMUNICATIONS
- ADAPTIVE MISSIONS



## Removable Payload Modules

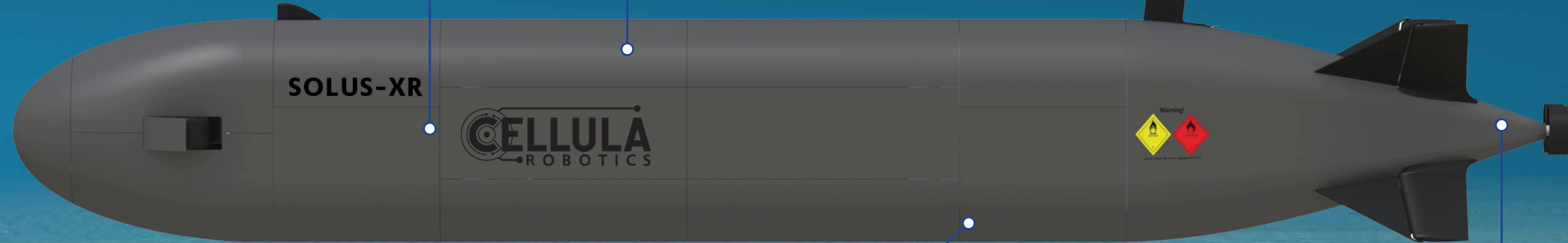
The forward and aft 2500 L payload modules can be field swapped for mission re-configuration. Payloads can include:

- Winch-deployed thin line towed arrays
- Deployable payloads
- Li-ion batteries to increase sprint endurance
- Seafloor suction anchor

Length: 12 m  
Cross-section: 1.7 x 1.7 m  
Displacement: 10000 kg (depending on configuration)  
Range: 5000 km  
Endurance: over 45 days  
Sprint speed: 8 kts  
Transport in a standard ISO 40' container  
Port to port missions

## Retracting Communications Mast

The mast can be retracted as necessary to reduce drag while submerged.

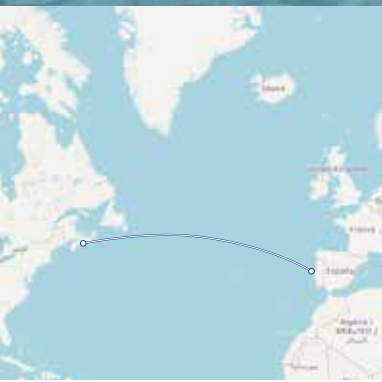


## Extreme Range AUV

Solus-XR is powered by redundant hydrogen fuel cells providing a submerged range of over 5000 km at 3 kts.

## Maneuvering

Deployable thrusters and dual buoyancy engines provide hovering capabilities.



### PERSISTENT SURVEILLANCE

Solus-XRs can deploy multiple listening stations to complement ASW missions. Data from the listening stations can be downloaded and processed onboard to feed into Solus-XR's adaptive mission engine.



### PAYLOAD DELIVERY

Covert and at significant standoff from launch, Solus-XR can deploy sensors or equipment from either of Solus-XR's large payload modules. A variable buoyancy system manages any change in mass.



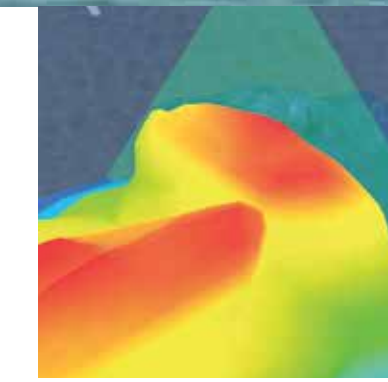
### ASSET INTEGRITY INSPECTION

Solus-XR can provide critical infrastructure protection for subsea telecommunication and power cables. Autonomous tracking with optical and magnetic sensors allows for regular inspection and change detection.



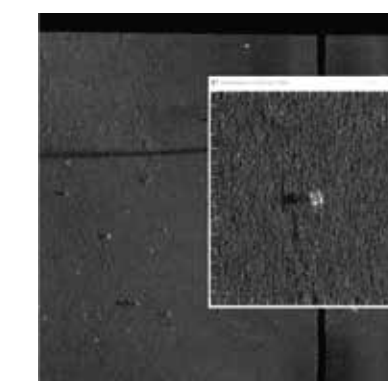
### ANTI-SUBMARINE WARFARE

When fitted with a winch, Solus-XR can deploy thin line arrays to detect and localize submerged targets. A low frequency sound source can be used to modify the acoustic profile of Solus-XR, providing a range of detection responses for battle space shaping.



### RAPID ENVIRONMENTAL ASSESSMENT (REA)

Covertly forward deployed, Solus-XR can collect wide area sea floor bathymetry with Synthetic Aperture Sonar, complemented with magnetics, CTD and acoustic measurements of the battle space.



### MINE COUNTERMEASURES (MCM)

As an extension to REA, Solus-XR can be tasked with wide area survey and autonomous artificial object detection. Countermeasures can be deployed against identified targets.