

ACUA OCEAN H-USV

Ocean Platform-as-a-Service

ACUA
O C E A N

ACUA's modular H-USV provides a scalable and persistent presence for distributed maritime operations and monitoring of critical national infrastructure. The vessel has the capability to deploy and recover a wide range of sensors with a payload of up to 4 tonnes. The modular design of the vessel means it can be rapidly mobilised to any site around the world, and can be equipped with a variety of sensor payloads to ensure maximum vessel utilisation.

H-USV DESIGN FEATURES:



Space: large moonpool with 20-foot ISO mounts for modular sensors payloads for an array of task-specific systems and sensors.



Weight: up to 4 tonnes for heavy payloads in up to 3m wave heights.



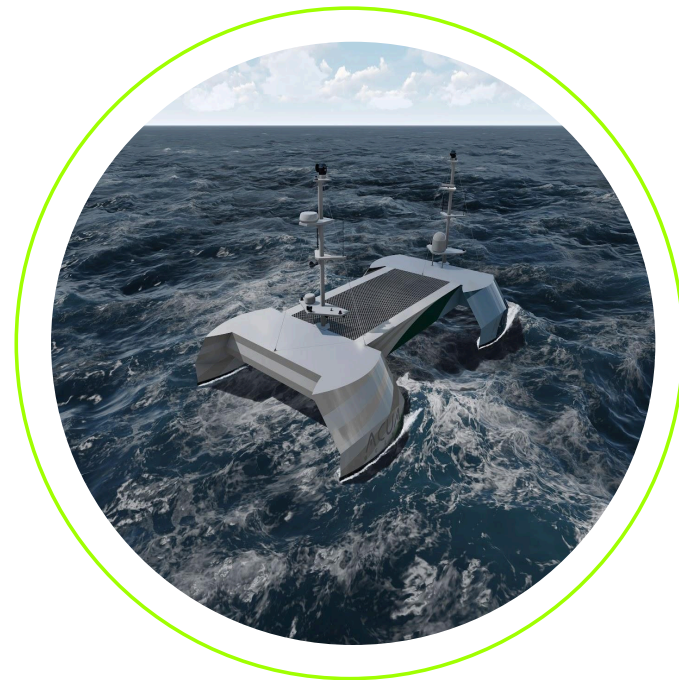
Power: up to 1 kW continuous power for payload for third party systems and sensors.



Persistence: multi-week persistence and enhanced seakeeping performance versus a monohull vessel for improved data collection.



Stability: the stable SWATH platform enables increased operational availability in higher sea states.



MARITIME SECURITY APPLICATIONS



Surface Intelligence Surveillance and Reconnaissance (ISR)



Seabed Surveys: Surface and Subsurface Data Collection



Anti-Submarine Warfare and Sub-Surface ISR



Monitoring of Critical National Infrastructure



Border Control and Security

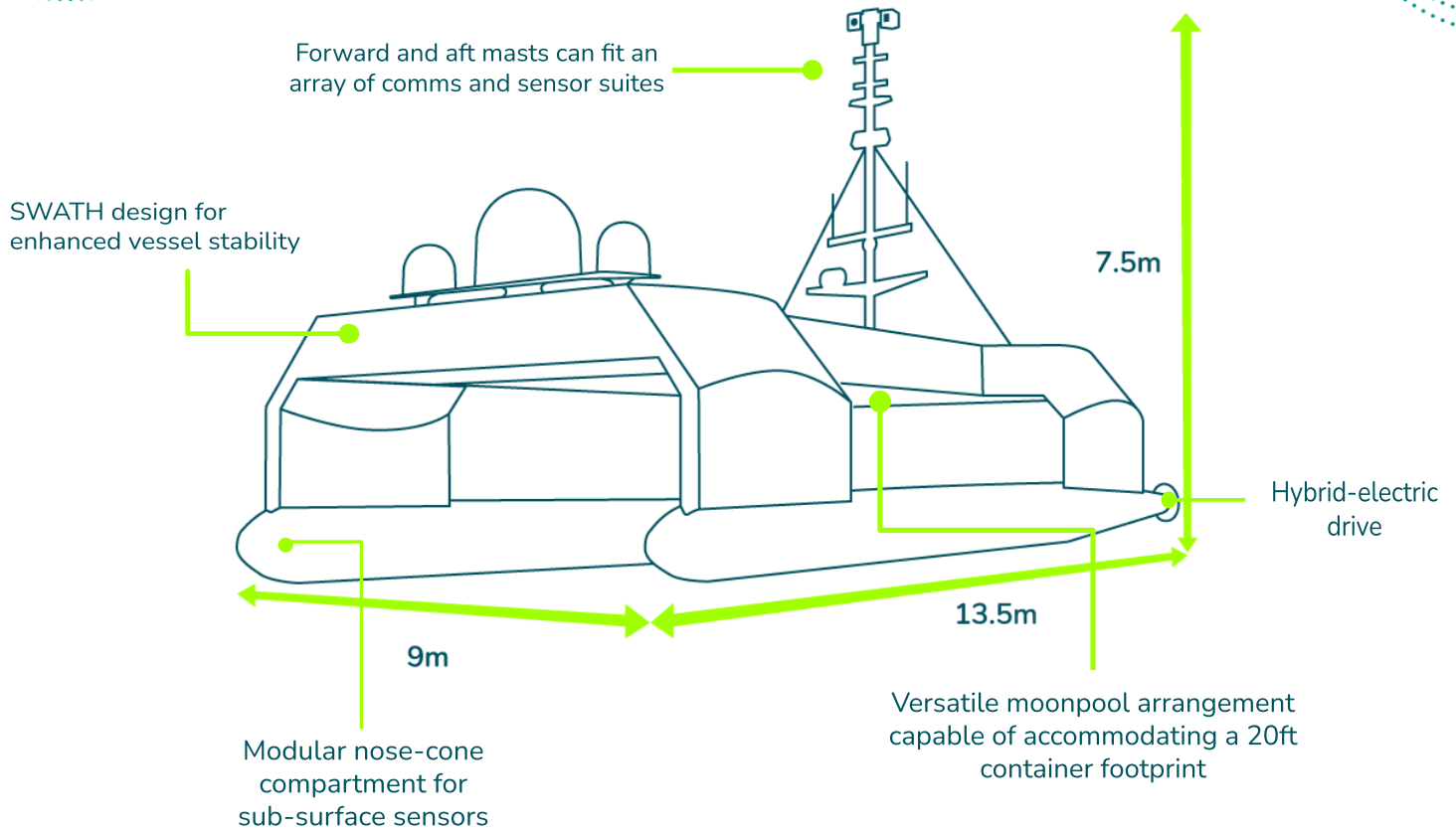


Surface and Subsurface Data and Communication Relay

ACUA Ocean is a UK-based maritime autonomy company developing the world's first hydrogen-powered uncrewed surface vessel for use in defence & security, offshore infrastructure and marine protection & conservation.

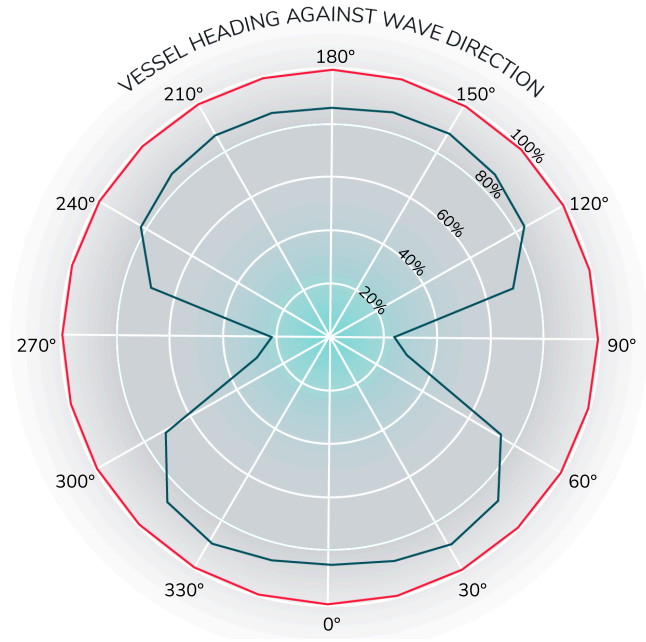
LET'S DISCUSS THE FUTURE OF MARITIME AUTONOMY

John Hunnibell | Head of Marine Operations
john.hunnibell@ocean.tech
+44 (0) 7732 344 542



CRAFT TYPE	Uncrewed Remotely-Operated SWATH
DRAFT	1.6m
LENGTH	13.5m
BEAM	8.9m
MAST HEIGHT (FROM DWL)	8.1m
MAX DISPLACEMENT	25.7t
DECK	12.3m x 5.9m
MOONPOOL DIMENSIONS	6.5m x 3.8m
MAX PAYLOAD	4,000kg
PAYLOAD POWER	1kW (cont.)
OPERATIONAL SPEED	4 kts
SPRINT SPEED	10 kts
ENDURANCE	14 days at 4 kts (gaseous H2 @350 bar) 40 days at 4 kts (Liquid H2)
POWERTRAIN	2x 124kW E-motors, H2 fuel storage, 2x 40kW Hydrogen Fuel Cells
COMMUNICATIONS	LeoSAT, VSAT Iridium, Wifi, 4/5G
PAYLOAD	Towed array, ROVs, UAVs, AUVs, hull-mounted and surface ISR sensors

SEAKEEPING % AVAILABILITY INDEX:
Av. Wave Height=4.0m, Av Wave Period=9.0s when vessel is stationary



University of Southampton modelling shows the 13.5m SWATH design significantly outperforms a conventional 39m monohull for static ROV deployments.