USS unmanned SURVEY SOLUTIONS

USS inception MKII

The USS Inception MK II is a small USV built for tough assignments in ports, harbours, lakes and reservoirs.

'Built by surveyors, for surveyors'

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USS inception MKII

Unmanned Survey Solutions (USS)

USS designs and builds Unmanned Surface Vessels (USV's) for purchase or rent. At the heart of USS is a desire to make surveying easier, safer and cost effective compared to manned vessel solutions. Our designs are created from in-depth knowledge and experience of using sonars and other sensors for survey operations. We then incorporate ease of installation, calibration and operation of the payload equipment. Finally, the safety of operation and robustness when working in the marine environment, all form key aspects in how we create reliable products and solutions which we are proud to offer to the international market.

The Inception MK II USV:

- Is built from aluminium for a robust solution in tough environments
- Is based on tried and tested airborne drone technology for reliability and cost reduction
- Encompasses a modular design that offers easy swappable payload pods allowing for multiple solutions from one vessel
- Has the highest weight and volume payload carrying capability in its class
- Includes an autonomy waypoint following module as standard and at no extra cost
- Is designed by surveyors for surveyors and is available to purchase or rent

'Built by surveyors, for surveyors'

t: +44 (0)1872 630 070
e: info@unmannedsurveysolutions.com
w: unmannedsurveysolutions.com

USS inception MKII

Removable antenna bar for carrying communication and payload antennas.

Fabricated from aluminium and powder coated to reflect heat.

Twin aluminium hulls are robust, buoyant & stable.

The Unmanned Survey Solutions (USS) Inception Class MK II Unmanned Surface Vessel (USV) is designed by surveyors, for surveyors. This modular, versatile and robust USV is composed of tough aluminium hulls, weed cutting propellers and a modular payload pod for housing various sonar and environmental sensors.

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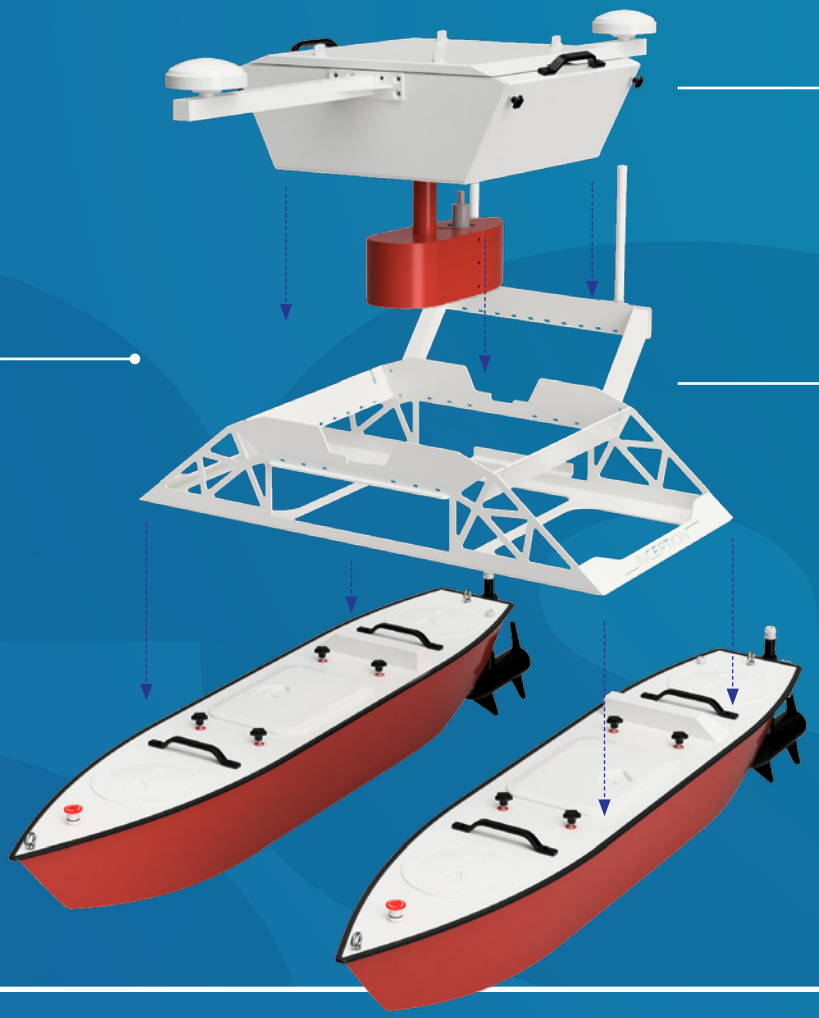
Modular by design

The design concept of the Inception MK II is modular from the internal electronics to the main vessel components, allowing for fast swap out of parts and reduced survey downtime in the event of unforeseen circumstances. This modular concept also offers huge versatility as each USV can have more than one payload pod each fitted with a different set of sensors.



Payload Pod

Each high capacity payload pod can be fitted with a variety of hydrographic or environmental sensors.

Bridge

The bridge section rigidly joins the twin hulls together and firmly attaches the payload pod to the USV.

Twin Hulls

The hulls are made from aluminium for robustness, especially when operating in high risk shallow zones. They contain the vessel drive management system and all drive and payload batteries.

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One vessel - multiple payloads

Each universal payload pod is rigidly made to ensure that there is no flex or movement between sensors, which is an important requirement for hydrographic surveying. They are robustly built to tight tolerances ensuring a repeatable installation every time. Fitted with carry handles they are easily carried and fitted to the bridge section and rapidly secured by four thumb screws.

Payload Pod

Each high capacity payload pod can carry 66 litres of equipment with cable connections made through bespoke bulkhead connectors or through standard cable glands.

Pod Configurations

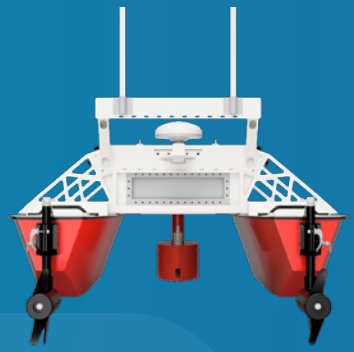
Each payload pod can be configured to customer specification so that they are sensor ready or provided as an ‘empty shell’ for customers own integration.

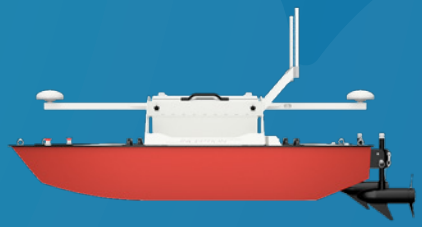
MBES Pod

The Multi-Beam Echo-Sounder (MBES) pod incorporates rigid antenna booms and a secure SONAR & Sound Velocity (SV) fairing. The Inertial Navigation System (INS) is fitted inside the pod along with the top side electronics and onboard computer.

SPECIFICATION

USS inception MKII





Length	1.92 m
Width	1.20 m
Height	0.80 m
Weight	40kg light ship
Hull Type	Twin hull
Hull Composition	Aluminium
Propulsion	(x2) DC brushed thrusters
Propellers	Weed resistant power props
Power	Advanced lithium batteries
Speed	3.5 knots
Endurance	Up to 4 hours from a full battery charge
Range	Over 2km
Payload	The payload pod carries up to 66 litres of equipment including Single-Beam, Multi-Beam, Side Scan Sonar or customer bespoke.
Draft	Dependant on payload, ~0.2 metres
Launch / Recovery	Transport via car or van. (x1) person launch from slipway or launching cradle, (x2) person launch from pontoon or river edge.

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