Specification

HydroBoat 1200MB		
Physical	Hull Dimension	1185 mm × 593 mm × 397 mm
	Working Weight	33 kg (including battery and sensors)
	Hull Material	Carbon fiber
	Wave & wind Resistance	3rd wind level & 2nd wave level
	IP Rating	IP67
Power	Propeller Type	2*1000W brushless DC
	Max Velocity	5m/s
	Battery Endurance	12 km range per battery @ 1.5 m/s (2 batteries included)
	Direction Control	Veering without steering engine
	Battery Safety	Power display, high-temperature/over-current/short-circuit protection
Communication & Control	Control Type	1.3km on 2.4GHz; unlimited on 4G
	GNSS Differential Types	Radio; network; controller differential; PPP
	Navigation Mode	Manual, auto-pilot, auto-return
	Camera	360° omnidirectional video
	Anticollision Sensor	Detection distance 10-30 meters
Features	Built-in IMU in Boat Control	Position accuracy: <1 m/30 s | Directional accuracy: ≤2.1°/h
	Safety Precautions	Auto return with low battery | Auto reverse in shallow water | Auto obstacle avoidance

Integrated Sonar System		
Physical	Type	All-in-one integration of transducer, deck unit, IMU, and GNSS
	Working Frequency	400KHz
	Range	0.2-200m
	Swath Coverage	30°-150°
	Beam Angle	1.4°×1.7°
	Vertical Resolution	1cm
	Number of Beams	512
	Ping Rate	60Hz
	Horizontal Stabilization	10°
	Weight (in air)	1.7kg
	Dimension	169*166*50mm
	Operating/Storage Temperature	-4℃~40℃/-20℃~60℃
Performance	Satellite System	GPS, BDS, GLONASS, Galileo, QZSS, SBAS, L-Band
	Positioning Accuracy	H: ±8mm+1ppm, V: ±20mm+1ppm
	Heading Accuracy	0.08° (2m baseline)
	Roll & Pitch Accuracy	0.03°
	Heave Accuracy	5cm or 5% range
Features	Real-time output of xyz result data	
	Built-in IMU for free calibration	
	Sound velocity inversion for free SVP	
	Multi-beam bathymetry	
	Side scan image	

CE

*Specifications are subject to change without notice. We reserve the right of final interpretation.
*All listed parameters are either theoretical values or measured under controlled conditions.

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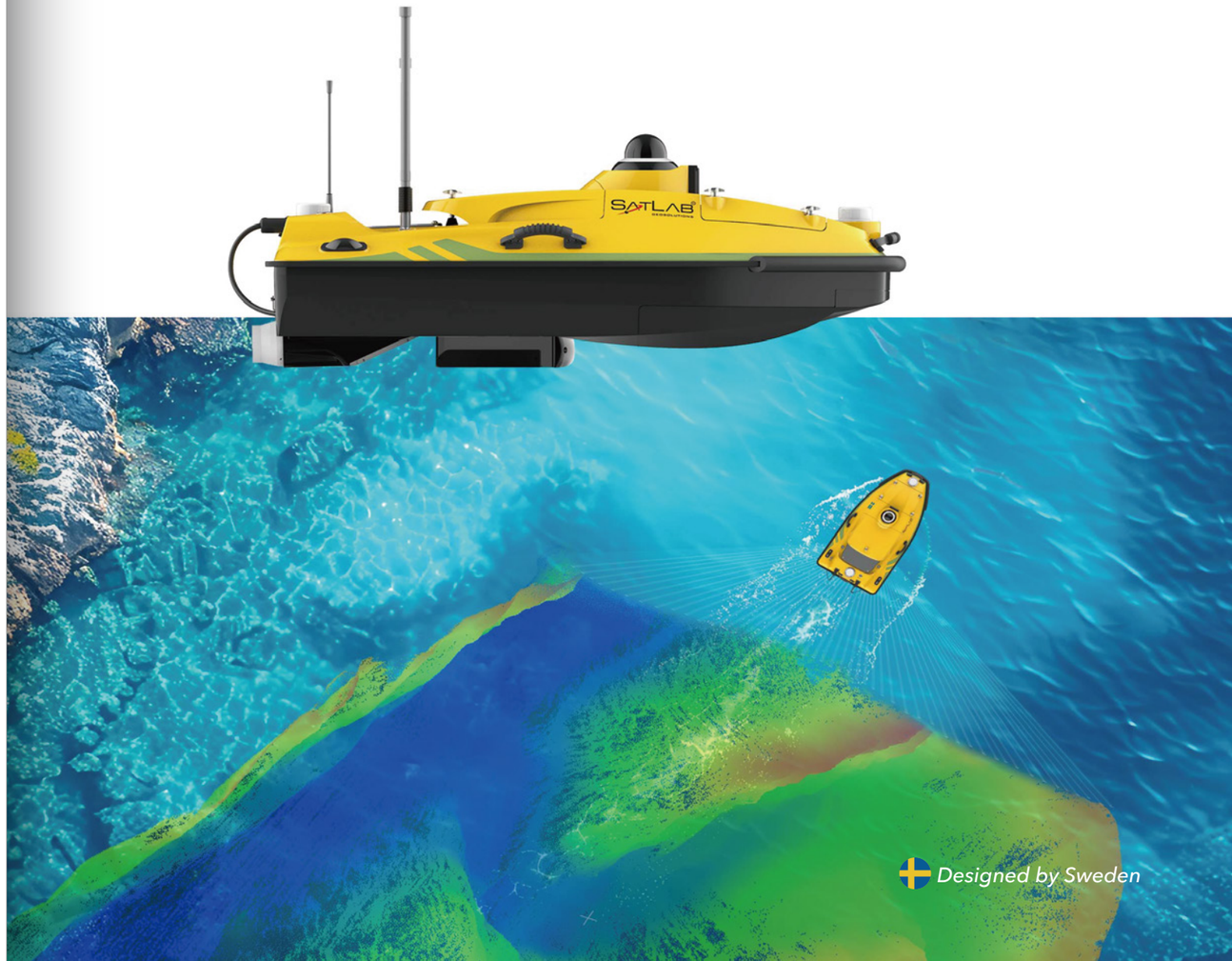
SATLAB® GEOSOLUTIONS

HydroBoat 1200MB

Simpler USV Multibeam Solution

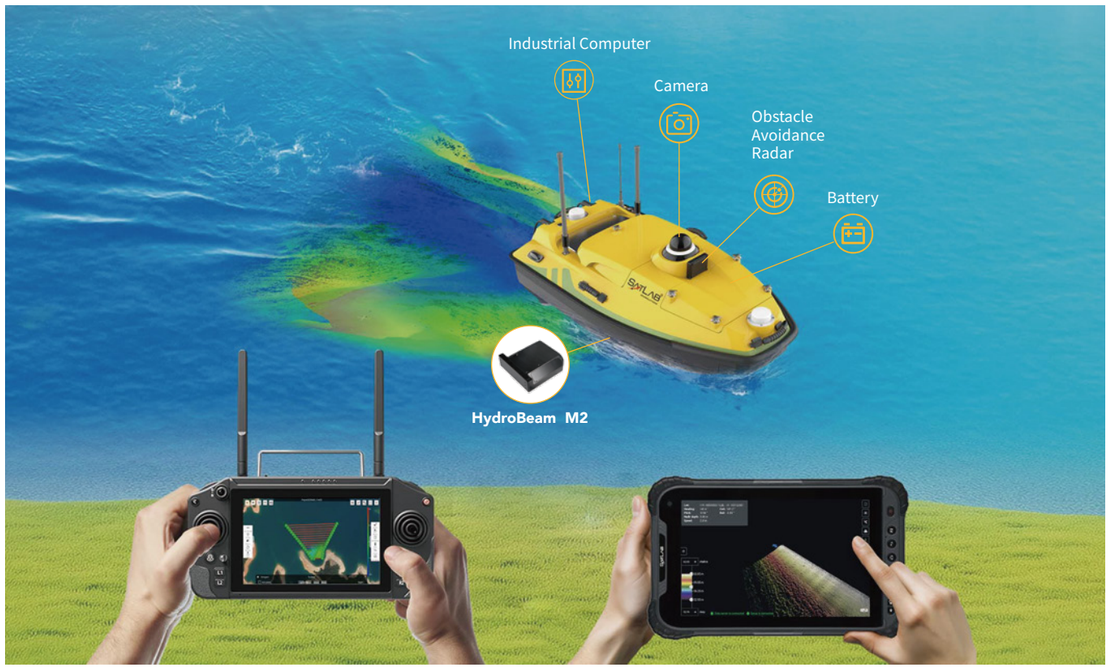


HydroBoat 1200MB

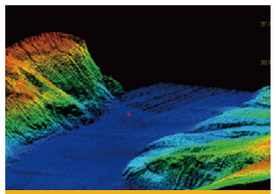
The HydroBoat 1200MB is SatLab's latest multibeam USV solution, combining proven unmanned vessel technology with the HydroBeam M2 MBES (Multibeam Echo Sounder). Compact and easy to deploy, it delivers efficient, accurate hydrographic surveys while reducing setup time and operational complexity. Designed for inland and nearshore environments, its lightweight, agile build ensures reliable performance where precision matters most.

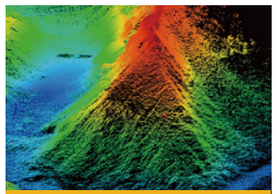
With intuitive controls and a user-friendly interface, the HydroBoat 1200MB enables small teams to achieve professional results with minimal effort. Balancing performance, simplicity, and value, it offers a dependable, cost-effective solution for surveyors seeking an integrated multibeam USV system.

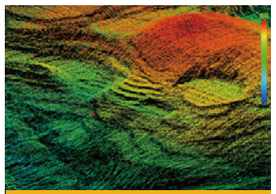
Turnkey Solution

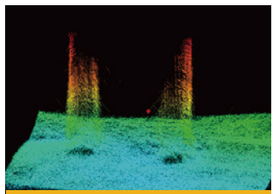


Applications


Rivers


Ridges

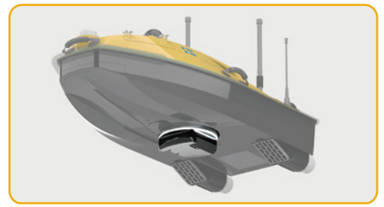

Terraced Fields


Vertical Walls

Advantages

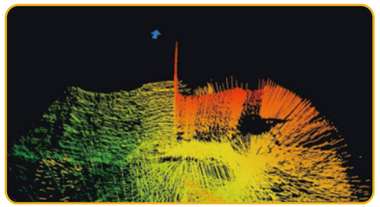
1 Ultra-Integrated Workflow

Built on advanced unmanned platform control, the system efficiently integrates the full workflow from data acquisition to deliverables.



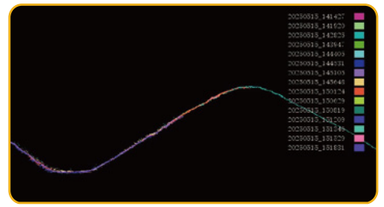
2 Live 3D Point Cloud & Side Scan Imaging

Real-time XYZ point cloud and side scan images on multiple terminals –view and monitor while surveying.



3 SVP-Free Sound Velocity Correction

Powered by SPIN(Sound Speed Profile Inversion), the system ensures precise sound velocity correction without extra SVP devices.



Benefits

5min Quick Start

Ready to survey in under five minutes —no installation, no calibration. Simple Android-based control with real-time data preview streamlines field setup.

7.5× Efficiency Boost

Covers up to 7.5× more area than single-beam systems. 512 beams and a wide swath angle improve acquisition, transition, and processing efficiency.

Up to 50% Cost Savings

Reduces costs with its all-in-one design —no separate SVP, boat rentals, or extra manpower. Less hardware, lower training needs, faster project delivery.

Reliable Everywhere

Delivers accurate, high-density bathymetric and object data, even in shallow, cluttered waters. Meets and exceeds IHO, CHS, and USACE standards.