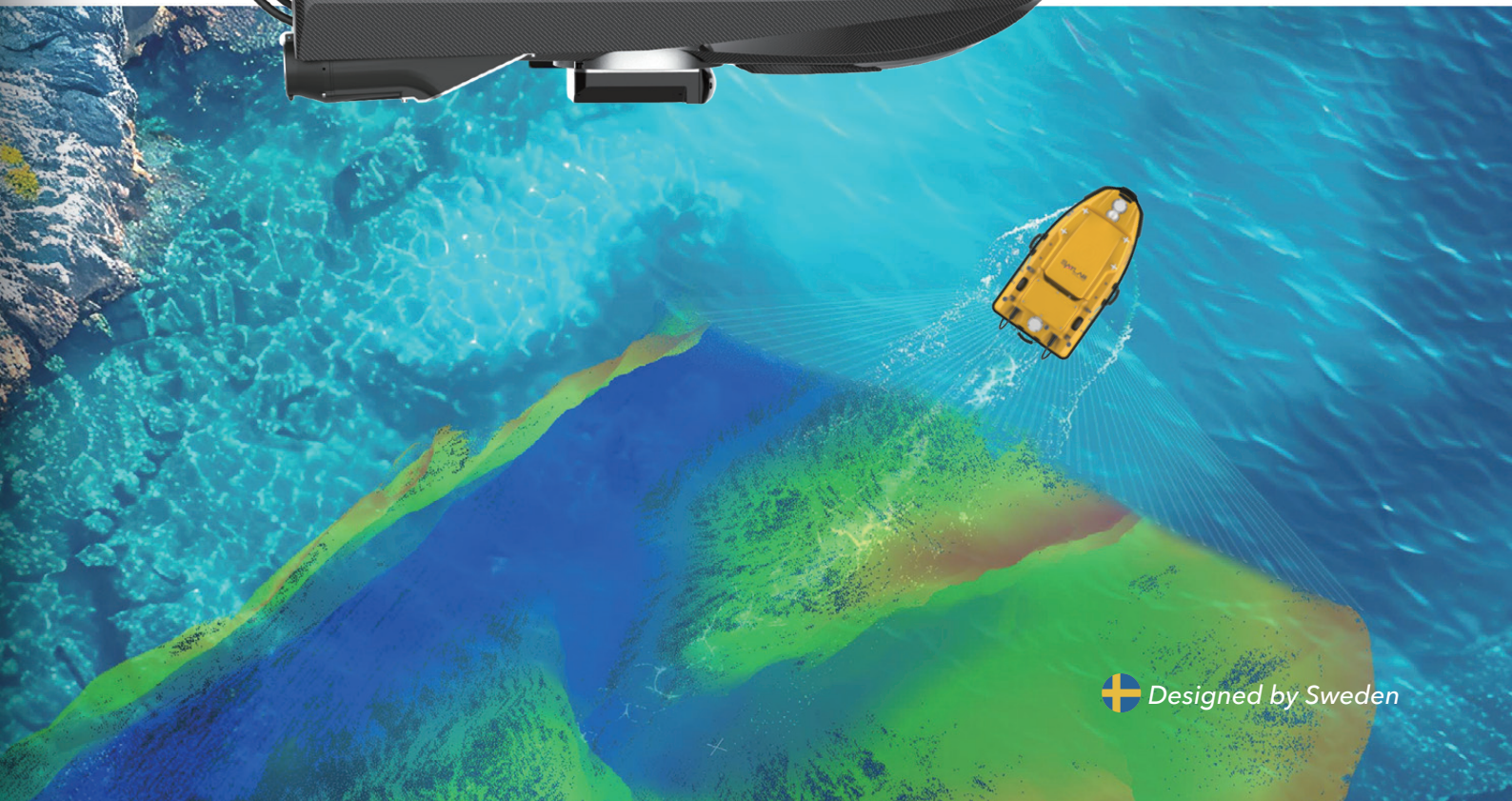
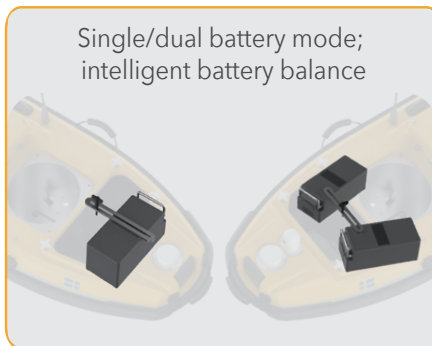
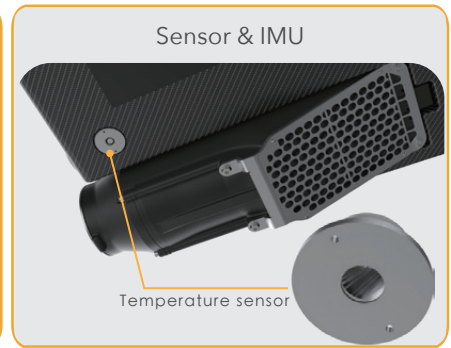
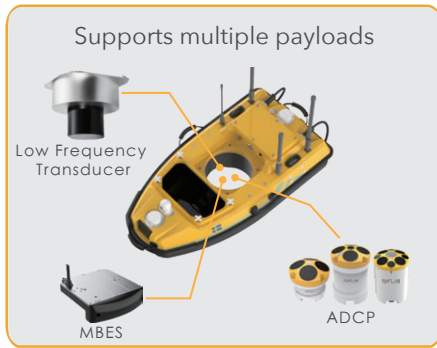


HydroBoat 1200 **GEN2**

Next-generation Multi-functional USV System



Advantages



Multi-device load



MultiBeam Echo Sounder

Comes with a full-featured Android app for parameter adjustment, point cloud display, and data collection

Automatic survey line planning (automatically sets line intervals based on depth)

SPIN technology (Sound Profile Inversion) , automatic calibration of sound velocity profiles

Easy to install; up and running in five minutes.



Single Beam Echo Sounder

Simultaneous measurement at 24 kHz and 200 kHz, depth range 0.1-600 m;

Automatic parameter adjustment with real-time display of stable echoes

Temperature sensor, real-time correction of surface sound velocity

Dual data storage (controller, boat), attitude calibration data



ADCP

Draft: 10 cm, reduce blind at the top

Autopilot + Smart Mode: Quickly measure water velocity

Maximum speed of 6.5 m/s; capable of operating in fast-flowing rivers



Other loads

Side-scan sonar, water quality analyzer, water quality sampler



HydroBoat 1200 GEN2

HydroBoat 1200 Gen2 is a new generation of compact multifunctional marine surveying platform launched by Satlab. It can be equipped with professional equipment such as the HydroBeam M2 multibeam echosounder, ADCP, side-scan sonar, and water quality parameter sensors. It is widely used in underwater topographic surveying, hydrological data acquisition, and water quality inspection.

Paired with the new version of the SLHydro USV Android application, HydroBoat 1200 automatically performs data acquisition for single-beam, multibeam, and ADCP. The boat features a built-in single-beam echosounder, an overall length of 1.05 meters, and supports single/dual battery operation with hot-swappable batteries. Combined with other upgraded hardware designs, it delivers safer and more reliable surveying operations.

Benefits



Boat Control System

- Smart Auto Mode
- Data Storage
- GNSS+SBES Data Merge
- SIM card for 4G Network
- GNSS+IMU provides stable position data



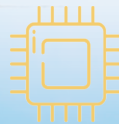
Android Software

- Smart Planning Survey Line
- Auto-Collect Data (SBES, ADCP, MBES)
- Safety (Return, Obstacle Avoidance, Hover)
- Unlimited-range 4G network connectivity
- View live camera images



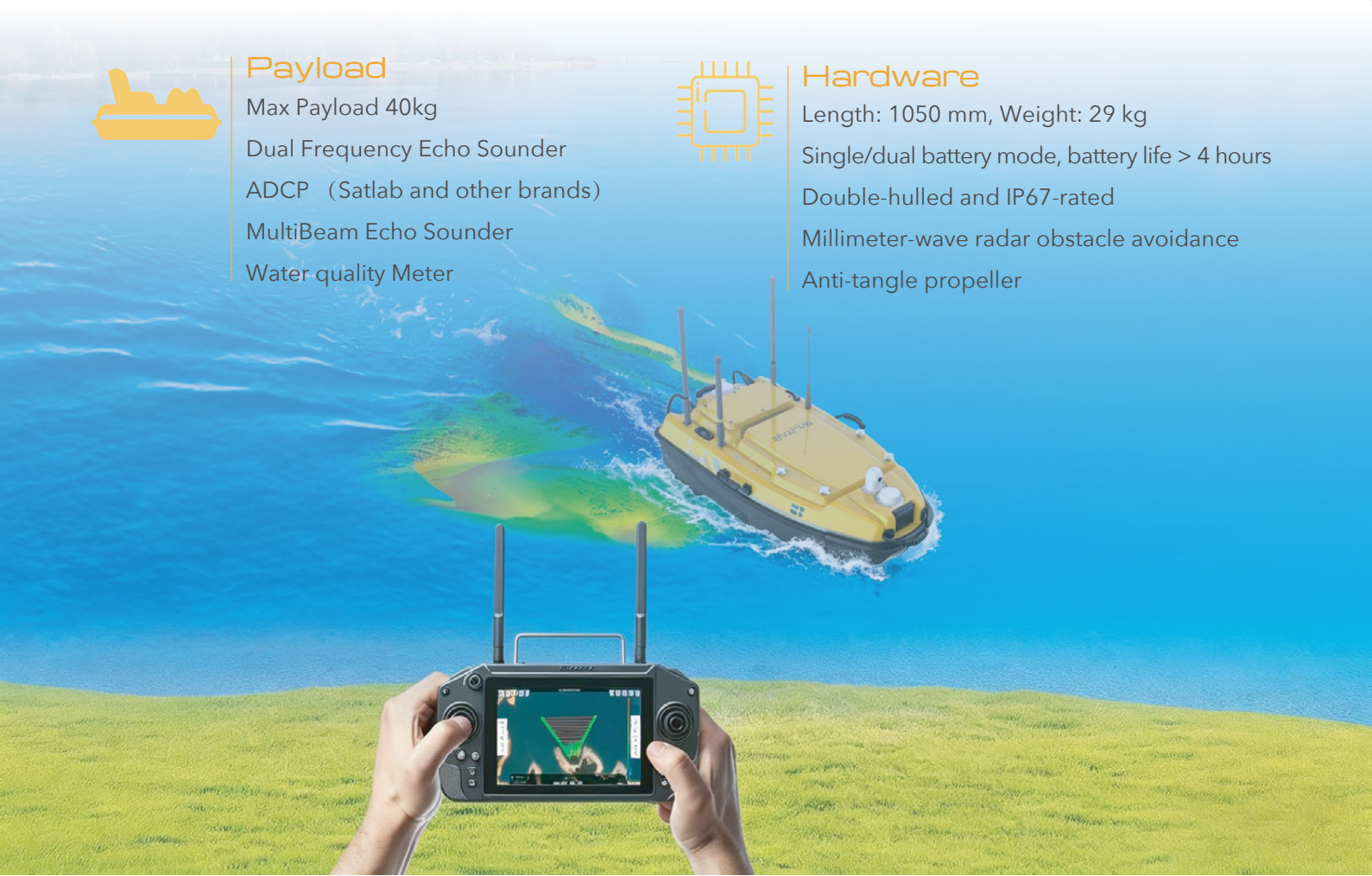
Payload

- Max Payload 40kg
- Dual Frequency Echo Sounder
- ADCP (Satlab and other brands)
- MultiBeam Echo Sounder
- Water quality Meter



Hardware

- Length: 1050 mm, Weight: 29 kg
- Single/dual battery mode, battery life > 4 hours
- Double-hulled and IP67-rated
- Millimeter-wave radar obstacle avoidance
- Anti-tangle propeller



Specification

HydroBoat 1200 GEN2

Hull Specifications	Hull Dimension	1050 mm × 558 mm × 356 mm	
	Weight (Single Battery)	29 kg (including one battery)	
	Maximum Payload	40 kg	
	Wave & wind Resistance	Sea state 2	
	Draft	110mm	
	Moon Pool Dimensions	24cm	
	Camera	Dual cameras, simultaneous 360° imaging	
	Anticollision sensor	Millimeter-wave radar;Range: 5–30 m	
	IP Rating	IP67	
	Propeller Type	2*1000W brushless DC	
	Battery	32.4 V, 24 Ah; supports single/dual battery mode; supports hot-swapping	
	4G Network	SIM card slot; For controller communication and CORS	
	Maximum Speed	6.5m/s	
Positioning parameters	Satellite system	BDS B1I/B2I /B3I、 GPS L1C/A/L2P(Y)/L2C/L5、 Galileo E1/E5a/E5b、 GLONASS L1/L2、 QZSS L1/L2/L5	
	Single positioning accuracy	Horizontal 1.5 m, Vertical 2.5 m	
	DGNSS positioning accuracy	Horizontal 40 cm + 1 ppm,Vertical 80 cm + 1 ppm	
	RTK positioning accuracy	Horizontal ±8 mm + 1 ppm, Vertical ±15 mm + 1 ppm	
	Direction accuracy	0.1° (1 m baseline)	
	IMU accuracy	2.1°/h, maintaining high-precision position for 30 seconds	
	Differential mode	CORS, BASE, PPK, PPP (b2b and HAS)	
Single beam echo sounder	Frequency	200KHz (standard)	24KHz (optional)
	Beam angle	5°	34°
	Depth range	0.2-200m	1-600m
	Accuracy	±1cm+0.1%h	±1cm+0.1%h
	Resolution	1cm	10cm
	Temperature sensor	-55°C to +100°C; real-time automatic sound velocity correction	
Controller	System	Android 13 System	
	Communication Range	2.4 GHz: 2 km / 4G: unlimited range	
	Battery Life	8 hours	
SLHydro USV Software	Features	Mission planning; Data acquisition; Auto-navigation Auto-return when contact is lost; obstacle avoidance	
	SingleBeam	Automatic parameters	
	ADCP Survey	Auto flow measurement, auto-adapting flow rate	
	MultiBeam Survey	Auto Design Line (Auto-design next survey line based on depth) Auto SPIN: Automatically calibrates sound velocity without SVP data	
Multi Sensor OPTIONAL	External Interfaces	Basic Version: 1×RS232 MBES Version: 1×RS232; 1×M2 Port; 1× Network and External Power Supply Interface	
	Payload(Optional)	MultiBeam:MBES, dual-frequency SBES , ADCP, SSS, Water Quality Meter	
	Compatible ADCP Models	Hydroflow 600,Hydroflow1200, M9, RiverStar, RiverPro, RiverRay, RioGrande	



*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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