

HydroBoat 1200

Multi-Purpose USV Platform for
Hydrographic Surveys and Monitoring



HydroBoat 1200

HydroBoat 1200—an embodiment of compactness and ease, tailored for seamless operation across a spectrum of equipment.

Enhanced by professional CFD technology, its stability finds new heights. Melded with high-precision single-beam echo sounder, GNSS directional positioning receiver, and an advanced intelligent boat-control system, it deftly serves varied water operational demands.

Augmented safety through embedded IMU, 360° pan-tilt camera, and millimeter-wave radar fortifies its attributes comprehensively. This autonomous vessel, which can be mounted with leading ADCP, side-scan sonar, dual-frequency sounder, multi-parameter water quality meter, and more, stands poised as the quint-essential partner for tasks encompassing current measurement, bathymetry, underwater survey, and water quality assessment.

Features

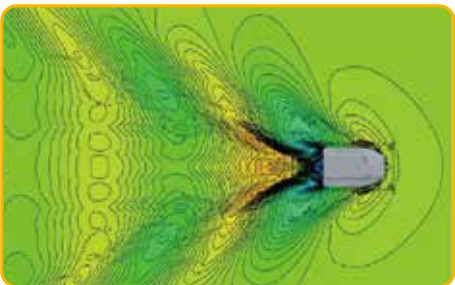


Adaptive Water Flow

Precise hovering and efficient trajectory tracking. No fear of waves and wind. Follow predefined path with accuracy even in challenging environment.

New INS Combination Algorithm

Measure changes in velocity and orientation, and able to solve the accurate position information in GNSS-blocked areas to complete the planned work.



Stability by Design

Hydrodynamically efficient design for the USV's intended operations, guided by CFD simulation, enhances hull stability and noise reduction under varied water conditions and loads.

Portability

1. 25 kg lightweight hull
2. 1185 mm small size hull
3. Multi-function Android boat control software



Versatility

1. 240 mm large moon pool
2. Supporting transparent data transmission
3. Reaching maximum boat speed of 6 m/s for efficient movement

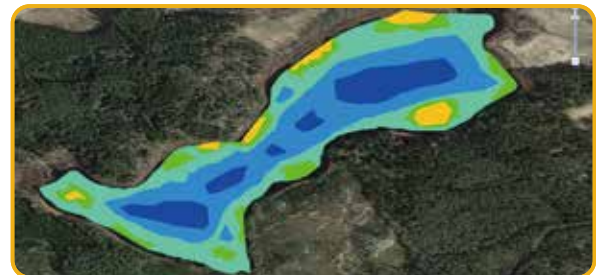
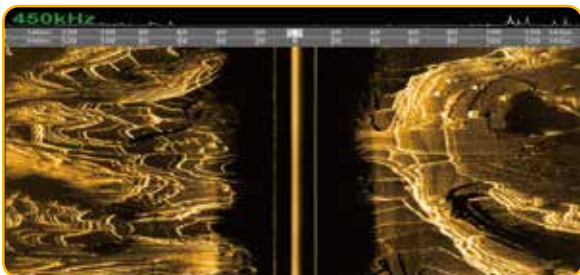
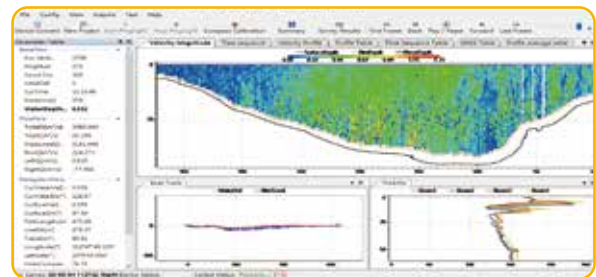
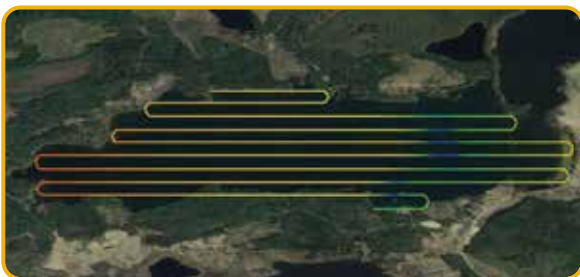


Safety

1. 360° PTZ camera
2. Millimetre wave obstacle avoidance radar
3. Smart battery management platform



Applications



Specification

Vehicle Specifications

Hull dimension (L x W x H)	1185 mm*593 mm*397 mm
Weight	25kg(No Battery)
Max Load	25kg
Material	Carbon ber, Rubber Bumper
Anti-wave & Wind	3rd Wind Level & 2nd Wave Level
Waterproof	IP67
Indicator light	Two-color light
Camera	360° omnidirectional video
Anticollision sensor	Detection distance 10-30 meters
Propeller	2*Brushless Propeller
Direction control	Veering without steering engine
Maximum speed	6m/s
Battery endurance	One battery 4.5h with 1.5m/s, total 2 batteries

Controller

System	Android System
Software	SLHydro USV
Control range	1.3km on 2.4GHz; Unlimited on 4G

GNSS Performance

Satellite system	GPS, BDS, GLONASS, Galileo
RTK Positioning accuracy	H: ±8mm + 1 ppm RMS V: ±15mm + 1 ppm RMS
Heading accuracy	0.2° @1 m baseline
INS accuracy	2.1°/h, <1m/20s
Refresh Rate	200Hz

Built-in Single Beam Echo Sounder

Depth range	0.15m - 200m
Accuracy	±0.01 m + 0.1% x D (D is the Depth of Water)
Frequency	200 kHz
Beam angle	5±0.5°

Software

SLHydro USV	Mission plannin, Vessel Monitoring, Coordinate conversion
	Bathymetric data acquisition, Bathymetric data download
SLHydro Sounder	Bathymetric data processing, Bathymetric data correction
	Bathymetric data export

Expandable Sensors

Acoustic Doppler Current Profiler
Single Beam Echo Sounder
Side-scan Sonar
Multi-parameter Water Quality Meter



Headquarters:
Geosolution i Göteborg AB
Stora Ävägen 21, 436 34 ASKIM,
Sweden

Regional Offices:
Warsaw, Poland
Jičín, Czech Republic
Ankara, Turkey
Scottsdale, USA
Singapore
Hong Kong, China
Dubai, UAE

www.satlab.com.se

