

Specification

Vehicle Specifications

Hull dimension (L x W x H)	1035mm*560mm*345mm
Weight	20kg(No Battery)
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 5h with 1.5m/s, total 2 batteries

Controller

System	Android System
Software	SLHydro USV
Control range	2km on 2.4 GHz; Unlimited on 4G
Communication mode	UHF

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

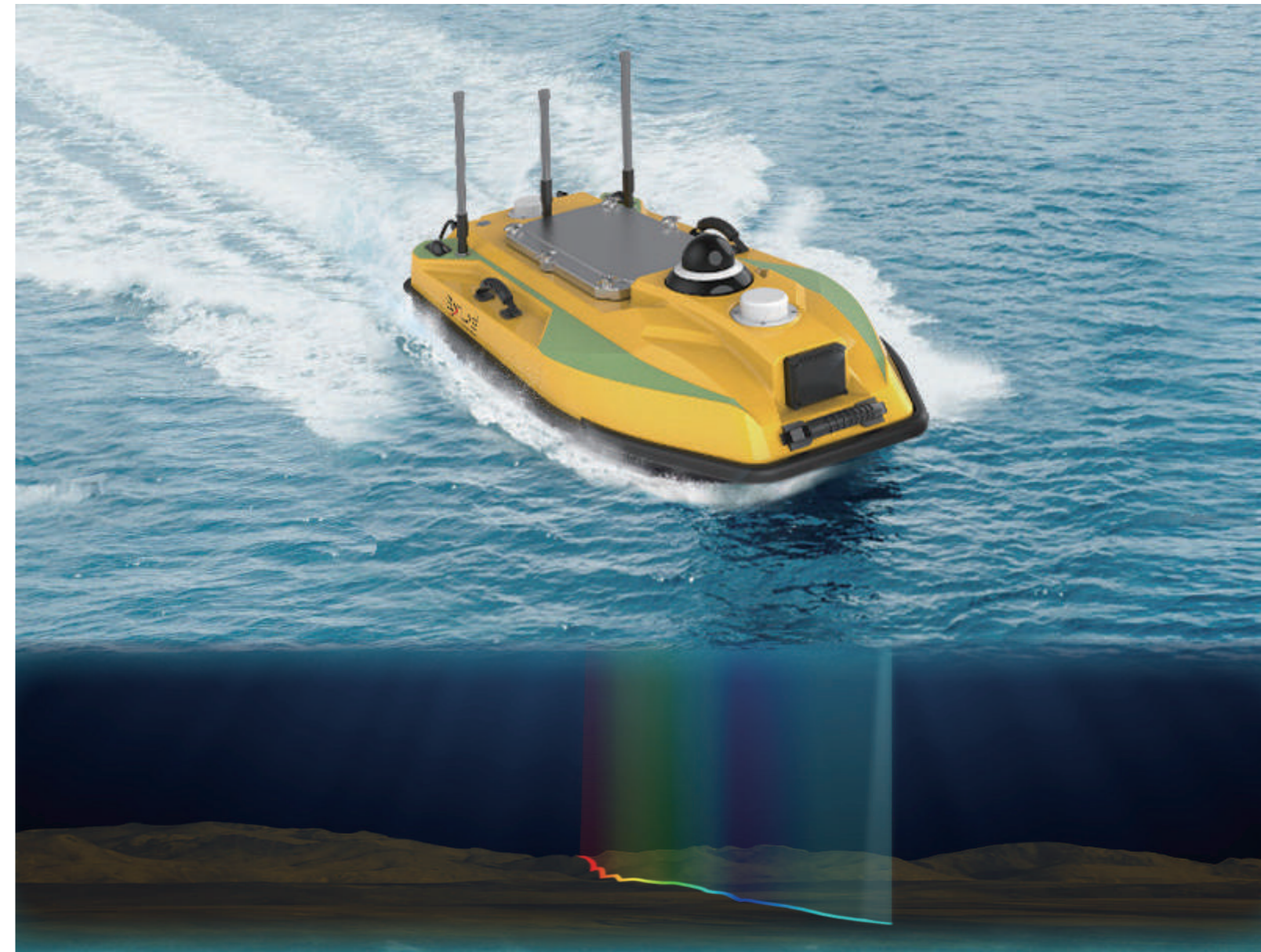
Depth range	0.15m - 300m
Accuracy	±0.01m + 0.1% x D (D is the depth of water)
Frequency	200 kHz
Beam angle	5±0.5°
Sounding Resolution	1cm

Software

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

HydroBoat 990

An Android-powered USV System for Bathymetric Surveys



HydroBoat 990

USVs (Unmanned Surface Vehicles) are widely used in hydrographic surveys, environmental monitoring, and water search and rescue. Among them, hydrographic surveying is the most used and developed field. When a hydrological survey is facing many unknown waters, it usually takes a long time navigation and requires high accuracy, which poses great challenges to the safety and health of surveyors.

The hydrographic survey USV combines various complex systems to offer users the simple and efficient operation mode. With double hull design, HydroBoat 990 USV integrates the GNSS system, bathymetry system, communication system and autonomous navigation system, which ensures both efficient surveying and safe navigation.

Top 3 Challenges about USV



Usability

It is complicated and a waste of time repeating the unnecessary operational processes in many instances.



Functionality

It is applicable to various environments with abundant functions which makes the surveying more convenient.



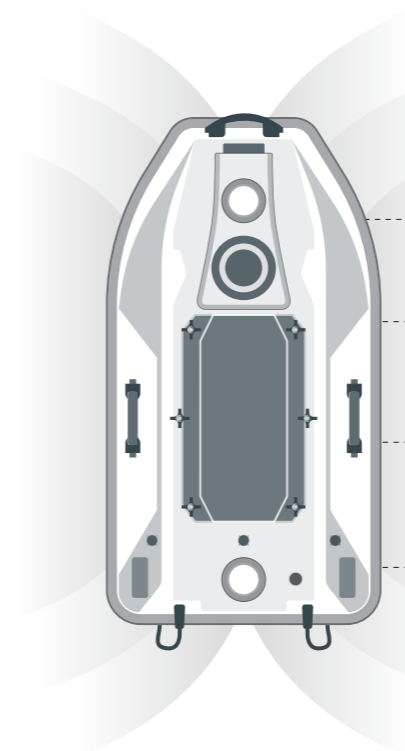
Reliability

It is important to avoid USV from sinking and wrecking. Besides, every part should be maintained in good quality for such a complex system.



HydroBoat 990 bathymetric USV system

System of efficiency and reliability



- 1 Supported by auto and manual mode in the pilot system, safeguarded by radar's obstacle avoidance and hovering system.
- 2 Stable hull design for standing waves, IP67 waterproof, and rugged body with collision protection.
- 3 One-click connection with a powerful controller makes the USV a direct-to-go system, operating at ranges of 2km.
- 4 The pioneering Android app for hydrography and pilot control, makes surveying easier and faster with one intelligent controller.



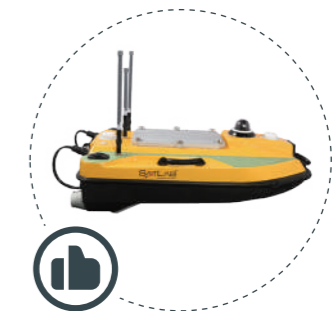
Usability

- Operate in One Versatile app
- Time-saving Turn on and Survey
- Network without Base Station
- Integration with GNSS and SBES
- Connection with Indicator Lights



Functionality

- Stable Hovering Function
- Avoid Collision with Obstacles
- Real-time Video Patrol
- 4G Remote Control
- Auto-reverse in the Shallows



Reliability

- IP67 Double Hull
- Anti-Collision & Wear-Resisting
- IHO Standard & CE Certification
- Automotive Grade INS Integration
- Onboard Water Depth Logging