Alpha Surveying

AlphaHi

Multifunctional Hydrographic USV

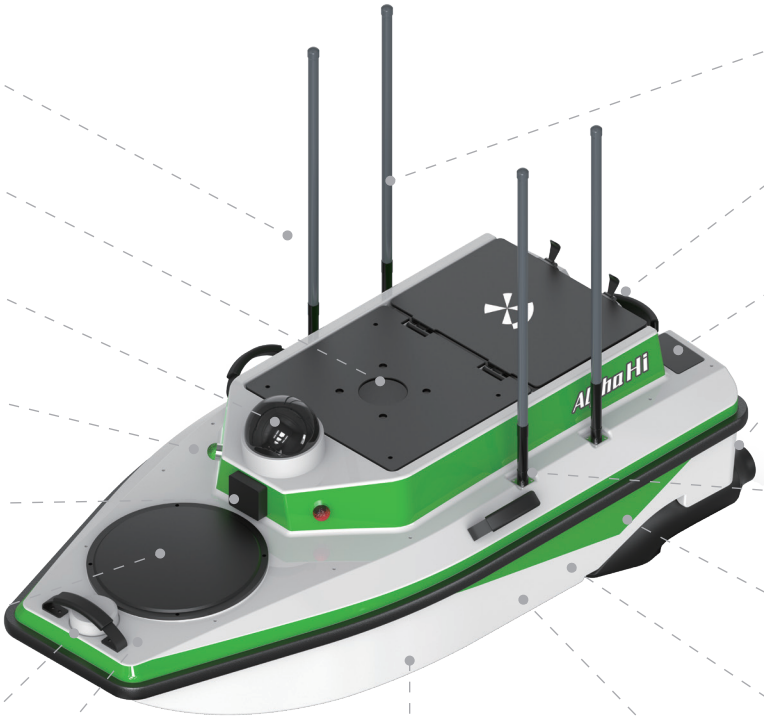
ADCP | Water Quality Detector | Multi-beam | Intelligent Hydrology Platform



ISO ISO9001 CE

Alpha Hi Multifunctional Hydrographic USV

Alpha Hi is a multi-purpose surface robot platform with excellent fluid mechanics design. It comes standard with RTK positioning and orientation and single beam, and is equipped with high-pressure and high-power dual pump jet thrusters. The front and rear of the hull are divided into three area: control system, patio and electrical. The hydrological patio can be equipped with hydrographic equipment such as ADCP, multi-beam, multiparameter water quality detector and other devices, and the deck bracket can be expanded with long baseline antennas, searchlights, megaphones, meteorological sensors, etc.



4G Antenna

Instrument cabin

HD camera

Side navigation light



Millimeter wave radar

Intelligent control system

Directional antenna

Deck extension

Remote control antenna



RTK antenna

*Industrial computer

Pump jet propeller

Radio antenna

Battery

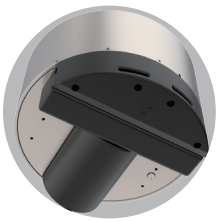
Side scan extended



Single beam sounding system



ADCP



Multi-beam



Multiparameter water quality detector



Sampling bottle

Integrated software

Remote control with screen

Android Qualcomm 8-core, 5.5-inch high brightness screen, dual frequency remote control, dual Hall rocker, remote control + digital transmission + map transmission.



Automatic Measurement

According to the set route, it automatically records the positioning information, sonar information, water temperature, air pressure and other sensor data.

Auto-Return

Automatically returns to home point at the end of the route or when the battery is low. The home point can be customized, and return can be activated at any time with one key.

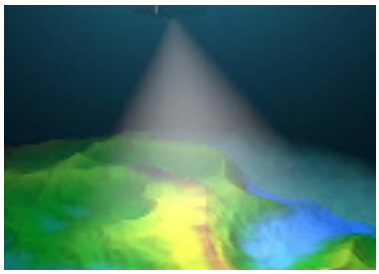
All-in-One USV Control Software

Functions in water works such as RTK and USV settings, map loading, route planning, status displaying, and result exporting, can all be realized in one such software.

On-site command



Application scenarios



Multi-beam measurement



Take water sample



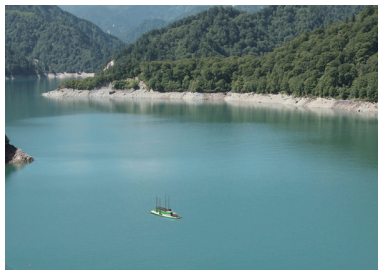
Hydrographic survey



Water quality testing



Inspection



Life detection

Professional Set

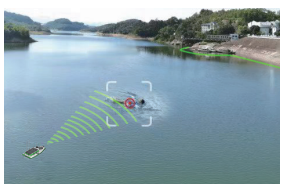
Alpha Hi	×1
Remote Controller	×1
Remote Controller Charger	×1
Remote Controller Data Cable	×1
Network Antenna	×1
2.4G Antenna	×2
430-450MHz Antenna	×1
Radio Station	×1
Radio Data Cable	×1
Radio Charger	×1
Radio Antenna	×1
Battery	×2
Battery Charger	×1
Data Cable	×1
Plug	×1
Ethernet Port Debugging Cable	×1
Life Jacket	×1
Tool Bag	×1
USV User Manual	×1
Configuration Checklist	×1
Safety Instructions	×1
Warranty Card	×1
Certificate of Compliance	×1

Customization



Automatic lifting system

Sensor + stepper motor control system supports sampling of different water layers, automatic recovery and control of sound velocity profilers, etc.



Visual AI

Automatically identify shore, waterline, and water surface targets through visual technology to achieve intelligent execution of water operations tasks

Technical Specification

Hull	Dimension	118*55*45cm
	Material	Polymer composite materials
	Type	Streamlined hull
	Net weight	25kg
	Maximum load	45kg
	Wind/wave resistance	Level 3 wind, Level 2 wave
Single Beam	Sounding range	0.2~200m
	Accuracy	1cm±0.1%h，h = the water depth (meter
	Frequency	5Hz
	Beam angle	8°
Obstacle Avoidance	Video	1080p HD
	Millimeter Wave Radar	Standard
Power	Propeller	DC pump spray
	Material of the propeller	High hardness alloy blades
	Protective design	Front and rear protection against water weeds and fishing nets
	Speed	Cruise 2m/s，top speed 6m/s
	Power	33.6V，1776wh
	Battery life	6h, Optional 12h
	Battery installation method	Removable
Position and Orientation System	Satellite system	GPS: L1C/A, L1C, L1P, L2C, L2P, L5、 BDS: B1I, B2I, B3I, B1C, B2a、 GLONASS: G1, G2, G3、 Galileo: E1, E5a, E5b、 QZSS: L1C/A, L1C, L2C, L5
	RTK	Built-in GNSS Receive
	Positioning accuracy	Horizontal：±(8+1×10^{-6}D)mm， Vertical：±(15+1×10^{-6}D)mm
	Channel	1408
	Orientation System	High-precision three-dimensional electronic compass
		Two GNSS Antenna Orientation
Communication	RTK communication	built-in radio, 4G network
	Video	2.4GHz
	Remote control	2.4GHz
	Communication distance	Unlimited for network, radio 3km, remote control 2km (ideal environment)
Instrument Cabin	ADCP, multi-beam, Water quality multi-parameter, water quality sampling, inspection emergency response and other equipment	

*The above technical parameters are for your reference.The company reserves the right to change the design and planning of the product based on the actual product.

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