Alpha Surveying

AlphaMi

Alpha Survey USV

Light and potable | Highly integrated | Extensive and high-precision surveying



ISO
ISO9001

Alpha Mi USV for surveying

Alpha Mi is exclusively designed for single-person measuring work of lakes and rivers.Trimaran design ensures stable sailing and is used in conjunction with dual pumpjet thruster, RTK, single beam, HD image, and intelligent ship control are integrated for more convenient and high precision underwater measurement.





Easy Work For Even Single Person

The size of an alpha Mi is only 900×500×340mm, the whole set of which can be carried by single person without difficulty. The hull can be easily put into a car trunk. A single worker is able to quickly conduct his hydrographic survey as soon as the battery and the antennas are installed.













Convenient Operation

The boat is ready for measuring work from one site to another within minutes.

Working Time

Customized working time, 4-5 hours for 1 battary.

Dual Pumpjet Thrusters

Equipped with high-speed thruster, the top speed is up to 6m/s and is able to work in torrent.

4G For Remote Control

4G network brings unlimited control distance.

Single beam Echosounder

Equipped with highly sensitive echosounder that enables it to work in shoal area, and the shallowest depth it can survey is 0.2 meter.

Protection

Streamline slope design at the bottom of the boat plus blade-like filter and pump protect the vehicle from being entangled by aquatic plants.

Intelligent Obstacle Avoidance (Optional)

Optional Millimeter-wave radar obstacle avoidance system can avoid potential dangers beyond 40 meters.

Quick Disassembly Thrusters

When the thrusters are entangled with fishing line and other debris, you don't need to return it to factory for repair. The operator can use the default tools to disassemble it on site quickly, solve the problem and then continue the operation.







Multifunctional remote controller with screen



System: Andriod 8.1+ Qualcomm 8-cores chip

Transmission: remote control+ digital+ image

Screen: 5.5 inches high resolution (1920*1080)

Battery: 10000mAh Li-ion

Working time: 10 hours

weight: 650g

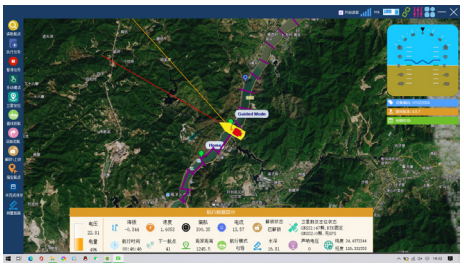
Software: intergrated hull control, surveying, sounding

Integrated Software System

The alpha software system is a software solution used for route planning, parameter setting, hull control, data display, status display and data export, etc. Customized maps and satellite image maps can be imported or downloaded when the network is working. The software system is able to automatically generate routes, execute navigation tasks, continue navigation task after breakout and finally return to the place of departure.



Reservoir Capacity Measurement



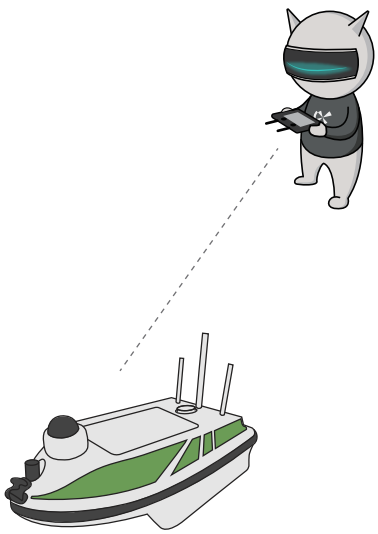
Cross Section Measurement



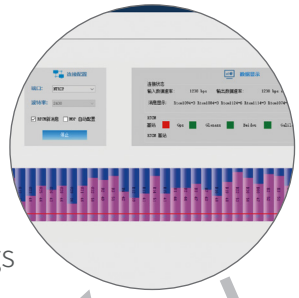
Harbor/Dock Channel Survey



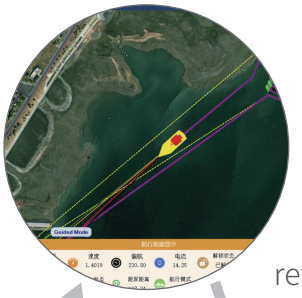
River Topographic Survey



Simple workflow



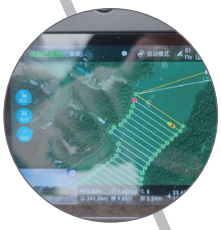
3.RTK settings



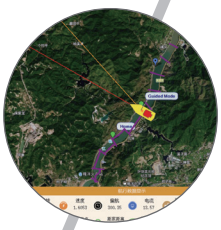
7.One click to return Home point



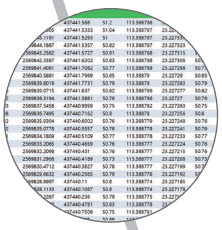
2.Connect USV



4.Route Planning



6.Navigation guidance



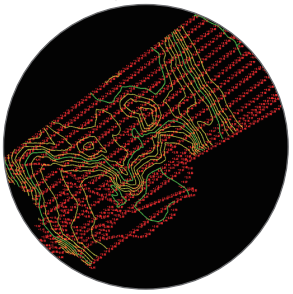
8.Export of achievements



1.Install antennas and battery



5.Carry out tasks



9.Data conversion

Alpha Mi USV Application Scenarios



Yellow River



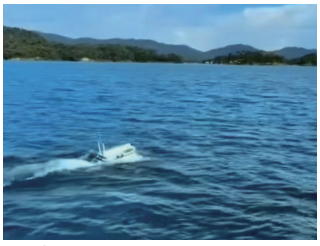
Han River



Pearl River



Songhua River



Lake



Fishpond



Coastal Waters



Dock

Professional Set



Mi Hull	×1
Propeller	×2
Intelligent hull control	×1
Built-in RTK	×1
Built-in HD camera	×1
Built-in single-beam echo-sounder	×1
Dual rocker android remote controller	×1
High performance water-proof battery	×1
Charger	×1
Communication antenna	×2
GNSS antenna	×2
Network antenna	×1
Radio antenna	×1
Carrying Case	×1
Life jacket	×1
Tool kit	×1
Instruction manual	×1

Technical Specification

Physical	Dimension	900×500×340mm
	Material	Polymer material
	Design	M-type trimaran
	Weight	16kg
	Max Payload	20kg
	Anti Wind&Wave	Level 4
Echosounder	Range	0.2m-120m
	Accuracy	1cm±0.1%height
	Resolution	1cm
	Beam angle	7.5°±0.5°
Obstacle Avoidance	Video	1080HD
Power	Thruster	DC pumpjet thruster
	Propeller	3-piece aviation aluminum alloy paddle
	Protection	Double protection from aquatic plants
	Speed	Top speed 6m/ s
	Battery	29.6V 888Wh
		4-5h(1.5m/s), customized 8-10h
Position And Orientation	Signal Tracking	GPS: L1C/A, L1C, L2C, L2P, L5
		BDS: B1I, B2I, B3I, B1C, B2a, B2b
		GLONASS: G1, G2, G3
		Galileo: E1, E5a, E5b, E6
		QZSS: L1C/A, L1C, L2C, L5
		SBAS: L1
		NAVIC: L5
	RTK	Built-in GNSS receiver
	Accuracy	Horizontal: ± (8+1×10^{-6}D) mm, Vertical: ± (15+1×10^{-6}D) mm
	Channel	1408
	Orientation	Three-dimensional electronic compass
		Dual GNSS antenna
Communication	RTK	Built-in radio and 4G netwotk
	Video	2.4GHz
	Remote	2.4GHz
	Control Distance	Unlimited by network, 2Km by radio (Typical Environment)

*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.

Guangzhou Alpha Surveying Technology Co.,Ltd.

NO.9 Caipin Road,Science City Huangpu District, Guangzhou

+86-20-82108930

www.alpha-surveying.com