

UB110

Surveying USV

UB110 unmanned ship system can integrate GNSS, single beam sounder, ADCP, sampling bottle, water quality multi-parameter, side scan sonar and other sensor equipment, which can fill the water area measurement field that cannot be reached or easily reached by manned ships such as shallows and near shores. It can be used in underwater topographic surveying and mapping, hydrological surveying, water quality sampling, real-time water quality analysis and underwater hidden pipe detection.



Lightweight and Convenient Hull

The hull is lightweight and can be directly put into the trunk of the car to measure in the field.

Long Battery Life

The battery has a long battery life, can travel for 6 hours at a cruising speed of 1.8m/s, and support quick charge safely and efficiently.

Super Power System

The hull propulsion system has strong power, high reliability, stable driving, and is suitable for various water flow environment measurement, the highest speed can reach 5m/s.

Smarter and Humanized Control System

With humanized design style, simple operation, it can automatically realize autonomous navigation measurement according to the planned route.

Higher Hull Strength and Durability

The hull is made of carbon brazing Vega Kevlar bullet-proof cloth high-strength composite material, which has obvious advantages in body shape design, non-magnetic, high strength, good toughness, strong impact resistance, easy mold opening, low mold cost, good designability and convenient forming.

Smoother Sailing Performance

The trimaran design has good seaworthiness, can sail smoothly in unstable sea conditions, and has a small stall. When the ship is sailing at full speed, the hull is lifted, so the reduced resistance makes the ship easy to accelerate; compared with conventional monohulls including W-shaped channel planning boats, the track is much smaller.

Easy to Maintain

Modular design makes it convenient for quick installation and disassembly.

Product Specification

Physical	
Hull Material	Kevlar + carbon fiber material
Size	1150 × 550 × 300 mm
Shape Design	"M" type design
Weight	19.3Kg (with battery and echo sounder)
Anti-wave & wind	2 nd wind level and 1 st wave level
Electrical	
Maximum Speed	5.0 m/s
Power System	<ul style="list-style-type: none"> Dual replaceable propeller Brushless DC motor
Battery	<ul style="list-style-type: none"> Battery capacity: 29.4V, 38Ah Weight: 5.33Kg Battery life: 6-8 h (1.5m/s) Charge time: 4-5 h Battery protection: IP67
Communications	
Remote Control Unit	<ul style="list-style-type: none"> Network type: 2.4G WIFI Control distance: ≤ 2 km
Network Bridge System	<ul style="list-style-type: none"> Network type: 5.8G WIFI, dual antennas, omnidirectional Communication distance: ≤ 2 km Automatic return: Support
Camera	<ul style="list-style-type: none"> Resolution: 200 MP , 576 x 480 Viewing angle: 120° Function: Support photo and video shooting
Single-beam Echo Sounder	<ul style="list-style-type: none"> Sounding range: 0.3-100 m Sounding accuracy: 1 cm ± 0.1% * depth
Optional Module	
Navigation System	<ul style="list-style-type: none"> Position mode: Autonomous, DGPS, L-band, RTK Positioning accuracy: Horizontal 8 mm ± 1 ppm, Vertical 15 mm ± 1 ppm
Avoidance Module	<ul style="list-style-type: none"> Obstacle detection distance: 10 meters Ultrasonic detection frequency: 10Hz
Transducer (Choose One)	
Single-beam Echo Sounder	<ul style="list-style-type: none"> Sounding range: 0.3-100 m Sounding accuracy: 1 cm ± 0.1% * depth
Multi-parameter Water Quality	<ul style="list-style-type: none"> Compatible with multiple brands (Hash, YSI, etc.) and multiple models of multi-parameter water quality analysis instruments Water quality includes: temperature, dissolved oxygen, PH, Conductivity, ammonia nitrogen, turbidity, chlorophyll, blue-green algae
ADCP Module	<ul style="list-style-type: none"> Precision: 0.25%* adjustable Water depth range: 0.2m-40m
Water Sampling System	<ul style="list-style-type: none"> Independent water sampling channel Collect sample water in customized position with customized water quantity Maximum two sampling bottles with each capacity of 1L
Software	
Hull Control Software	<ul style="list-style-type: none"> Remote monitoring Route planning
Echo Sounder Software	<ul style="list-style-type: none"> Collect and process data from the echo sounder

