星天海洋
STARTEST MARINE



High Payload / Versatile / Long Endurance

SU960

Offshore Multipurpose Long-Endurance USV

Product Overview

The SU960 is a long-endurance unmanned surface vessel for demanding offshore operations. Its seaworthy hull and quick-release shell support at least 2,000 kg of payload. The integrated instrument pod, stern slide frame and automatic winch allow multibeam, side-scan sonar and sub-bottom profiling on one mission.

Now, “One voyage, multiple operational results”.

The standard JW-1.5 gyrostabilizer supports operations in Sea State 4 and safe navigation in Sea State 5. Autonomous navigation, beyond-line-of-sight control and station keeping are supported by satellite and mesh links. Uses include hydrography, security patrols, coastal exploration and emergency rescue.



Remote Controller



Mesh Radio



Satcom



4G/5G

[System Features]

It's a very long voyage, and it's never stopped.

Extreme operation duration: High-speed diesel aircraft on board a vessel of 58.8 kW with a single continuous operation of 240 hours to support 10 x 24 hours of uninterrupted measurement. Wide exploration radius: under static water and 5 knots of operational speed, the continuous capacity is as high as 1,200 nautical miles, significantly extending the operational boundary of the ocean.

Hard nuclear resistance. Steady as Tarzan.

Rock-down black technology: Internal JW-1.5 minus gyro, with a quota reduction of 4500 NM. Data validity: In the event of a wave height of 0.5 m (positive wave), the impact of shaking was as high as 81.1 per cent, ensuring the extreme accuracy of the data collected by the sensor in the wind.

Tons of weight, one ship of power.

Large load: The full vessel provides a super-ship capacity for thorium 2000kg (200 kg on deck and 1800 kg underwater). A wide pod space of 1.35 x 0.6 x 0.3 m, with a 6-group generic base on the tail deck, is perfectly compatible with the multi-dimensional mount from underwater bathymetric equipment to the surface drone module.

Global communications, multi-dimensional perception.

Never lose contact: Accelerator, self-assembled network radio (15-30 km of communications), 4G/5G network and Beidou terminal, meeting global signal coverage from offshore to ocean. Smart asylum: Integration of X-band radar, laser radar, 360° microlight panorama and sound of shelter, support for night operations and travel through difficult harbours.

Agility in deployment and efficiency gains

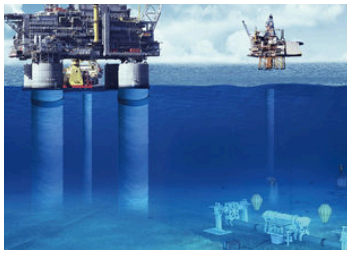
(c) Bi-boat repeater: 1.4 metres of extremely narrow hull meets standard hull road transport conditions and does not require additional excess applications, which are highly efficient. Team streamlining: Single-point suspension design allows single person to complete a tie-up placement within a four-metre gap, 5 field teams to operate 2-6 formations, and significantly reduce the number of personnel and parent ship charters

The cost of the operation.

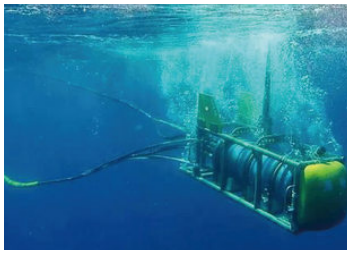
[Applications]



Offshore and Coastal Hydrographic Surveys



Marine Engineering and Fixed-Point Monitoring



AUV Operations Support



Rough-Sea Rescue and Security Patrols

[Specifications]

General Specifications	
Category	Specification
Length / Beam	9.60 m/ 1.40 m
Overall Height	2.73 m (mast stowed) / 5.75 m (mast deployed, to lightning rod tip)
Draft	1.35 m (pod retracted) / 2.55 m (pod deployed)
Speed	Maximum ≥10 knots. Operating speed 4–6 knots.
Range and Endurance	≥1,200 nautical miles at 5 knots (240 hours, calm water)
Operating Sea State	Normal operation in Sea State 4. Safe navigation in Sea State 5.
Payload Capacity	≥2,000 kg (200 kg on deck, 1,800 kg below the waterline)

Propulsion and Platform Equipment	
Category	Specification
Propulsion	1 × 58.8 kW high-speed marine diesel with Z-drive and propeller
Electrical Supply	9 kW total from two engine alternators and a 230 V AC main generator
Roll Stabilization	JW-1.5 gyrostabilizer, rated 8,000 rpm and 4,500 N·m
Deck Equipment	Elevator (1.2m process), towed automatic winch, multi-grade sliders
Compatible Payloads	Multibeams, single beams, side sweeps, shallow sections, SVP, ADCP, etc.

Navigation, Control and Communications	
Category	Specification
Control Modes	Remote navigation, line navigation, autonomous navigation, stationing (virtual anchor)
Situational Awareness	X-band radar, LiDAR, 360° imaging, AIS, obstacle-avoidance sonar, weather station and EO gimbal
Navigation and Positioning	Integrated inertial navigation with BeiDou/GPS, plus BeiDou-only positioning
Communications	Satellite communications, automatic network broadband (15-30 km), narrowband digital transmission, 4G/5G, beidou terminal, VHF ultra-telephone voice

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