Shark-S450D Ultra High Resolution Dual-Frequency SSS

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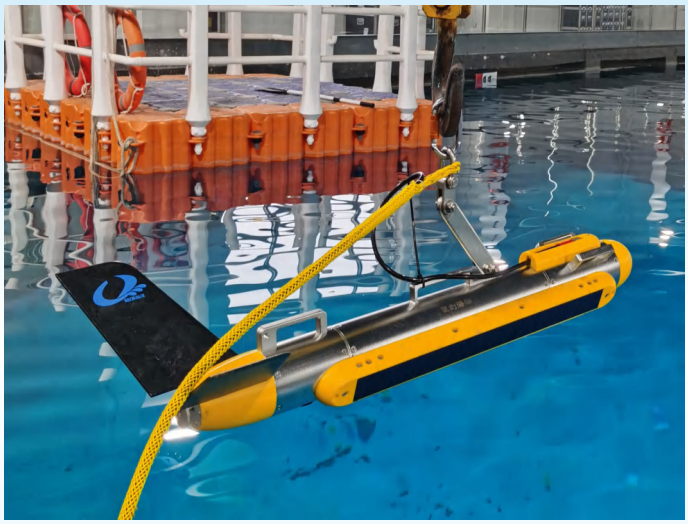


High-Resolution Imaging
Wide Survey Range
Rugged and Reliable
Versatile Applications

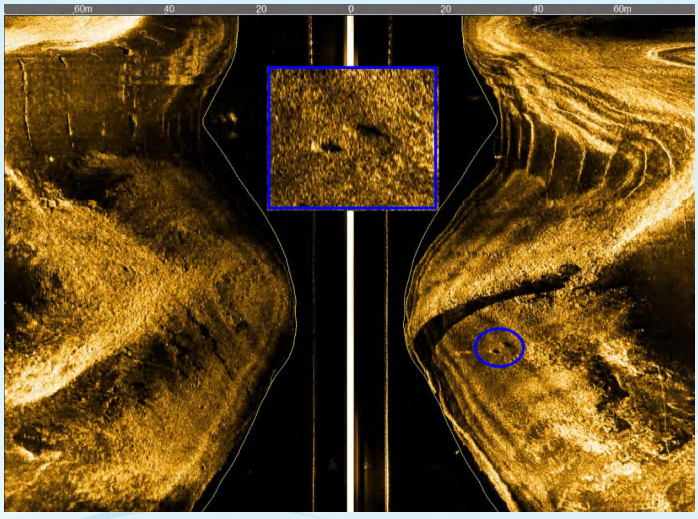
The Shark-S450D dual-frequency side scan sonar is a high-resolution, multi-purpose system equipped with 450 kHz and 900 kHz simultaneous transmit/receive capability and CHIRP signal processing technology. It features an ultra-narrow 0.2° horizontal beamwidth. The system provides both wide survey coverage and ultra-high-resolution imaging, enabling the precise detection of small targets.

The system consists of a high-pressure resistant stainless steel towfish, a high-strength armored coaxial cable, a waterproof deck unit, and proprietary OTech sonar software. The towfish is engineered for reliability and durability, with optional magnetometer interface and underwater positioning mounting structure. It supports multiple deployment methods, including towing, hull mounting, and side-mount installation. The underwater overload protection design provides effective impact protection, enhancing the towfish's safety during underwater operations.

The proprietary OTech software combines ease of use with powerful functionality, offering features such as real-time image mosaic stitching, sonar image waterfall display, survey line planning and navigation, track tracking and coverage display, data recording and playback, target management and export, and multi-window sensor information display. The software utilizes adaptive equalization processing technology to ensure consistent image quality across both near and far ranges. With minimal parameter settings and a user-friendly UI design, it is straightforward to operate. It supports output in the standard XTF format, compatible with third-party post-processing software. The software can be customized to meet specific requirements. The enhanced version provides real-time output of multiple raw data formats, enabling the development of AI-based automatic target recognition features.

Features

- Dual-frequency simultaneous operation
- Built-in attitude sensor for real-time tracking of pitch, roll, and heading and single-beam echosounder for accurate bottom-tracking
- Supports real-time mosaicking, raw data output, and SDK development
- OTech's multifunctional software offers free periodic upgrades and updates.



Applications

- Emergency support, police investigation, and firefighting rescue
- Underwater security and hazardous target detection
- Waterway management and obstruction survey
- Marine geology and geophysical survey
- Cable and pipeline route survey and maintenance
- Monitoring of underwater aquaculture

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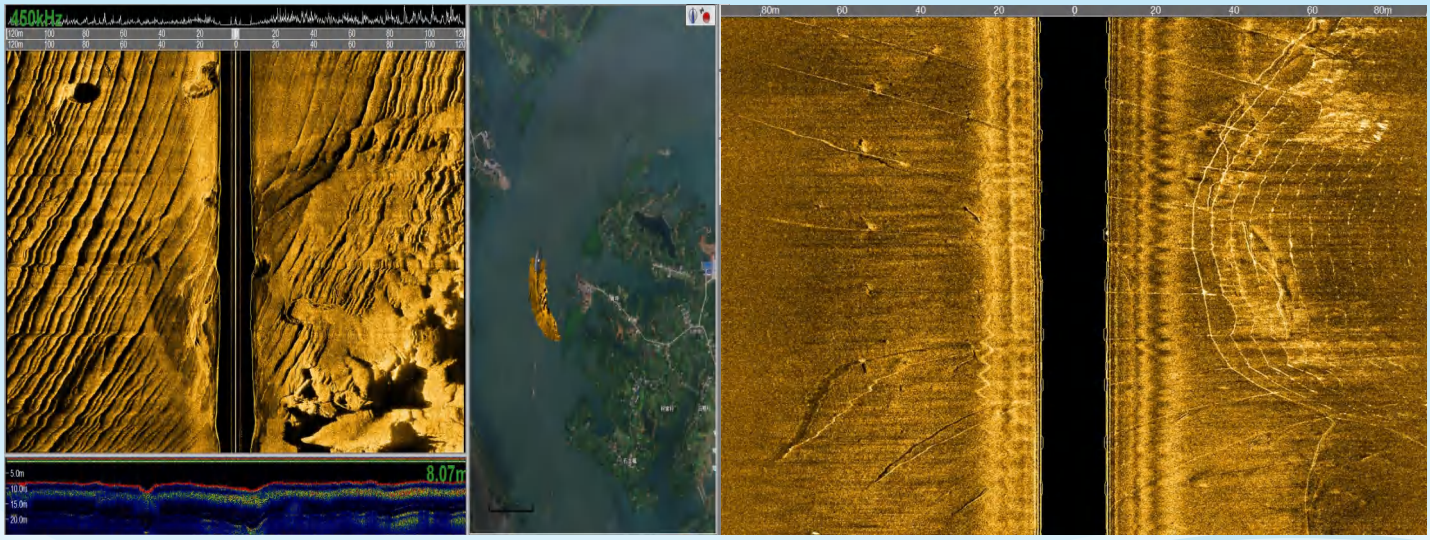
Sonar Specifications	Shark-S450D
Operating Frequency	450kHz & 900kHz dual-frequency simultaneous operation
Pulse Type	LFM (Chirp) / CW, 60 kHz bandwidth
Maximum Range	150m @450kHz，75m @900kHz
Beamwidth	Horizontal: 0.2° @450kHz, 0.2° @900kHz; Vertical: 50°
Resolution	Along-track resolution: 0.003h (range) @450kHz, 0.003h @900kHz； Across-track resolution: 1cm
Transducer Mounting Angle	Adjustable downward angles of 10°, 15°, or 20° (factory set to 20°)
Maximum Operating Depth	1000m (Cutomizable)
Standard Built-in Sensors	Single-beam echosounder, attitude sensor (pitch, roll, heading), pressure sensor
Towfish Dimensions / Weight	1143 mm (L) × 105 mm (D) / 26 kg (316L stainless steel)
Deck Unit Dimensions / Weight	227mm(L)×192mm(W)×50mm(H) / 1.9kg
Power Supply / Consumption	220/110VAC, 30W
OTech Software	Real-time mosaicking; live online mapping; OTSS and XTF formats recording; SDK development support; continuous raw data output.
Tow Cable	Kevlar coaxial cable, 50 m (customizable); optional winch available



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