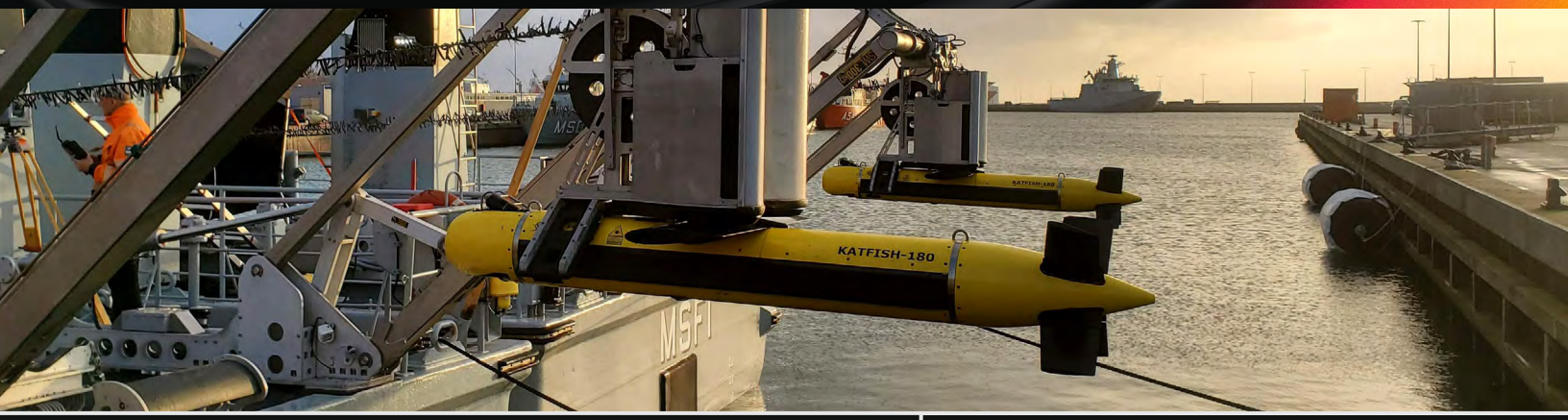
KRAKEN ROBOTICS | KATFISH™



Actively Stabilized Synthetic Aperture Sonar Towfish

Setting a new standard for underwater exploration

Kraken's KATFISH actively stabilized synthetic aperture sonar (SAS) towfish system delivers ultra-high-resolution data of up to 2 cm x 2 cm. The KATFISH towbody leverages articulated tailfins and an intelligent autopilot to compensate for motion, enabling high-quality data collection and large area coverage rates.

KATFISH Key Features

Survey Faster

- Survey at altitudes from 5-30 meters at depths of 300 meters
- Survey ranges up to 200 meters per side
- Multibeam nadir gap-filler
- Area coverage rate up to 3.5 km^2/hr

SAS Data in Real-Time

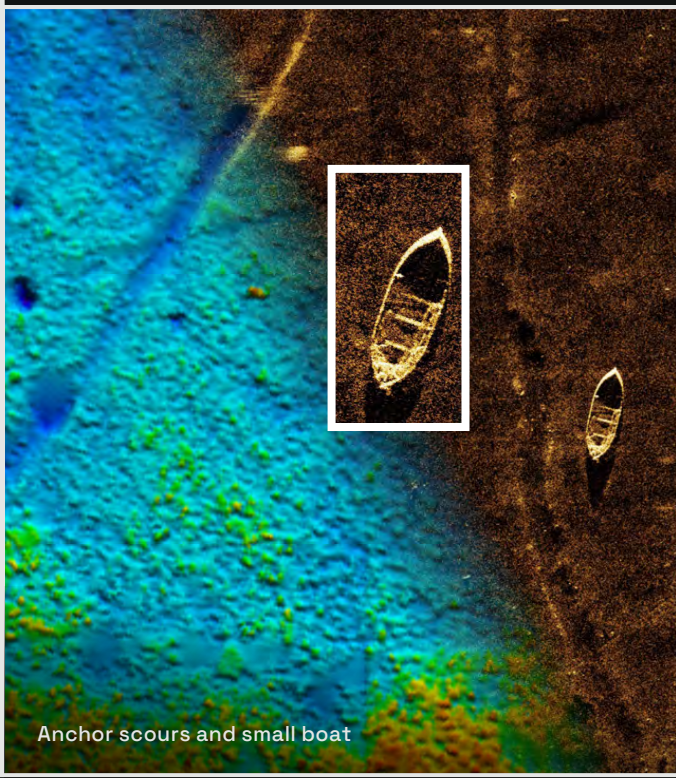
- 3 cm x 3 cm constant SAS imagery resolution
- 25 cm x 25 cm 3D bathymetry resolution
- Simultaneous dynamically focused sidescan sonar imagery
- Instride detection and classification

Ultra-High Resolution Post-Processed Data

- 2 cm x 2 cm constant post-processed SAS resolution

Autonomous Launch and Recovery System

- Decrease risk to assets and personnel through unmanned launch and recovery from USV LARS and ISO20 LARS
- Rapidly deploy on vessels of opportunity, from 11-meter class USVs to vessels with ISO20 footprint

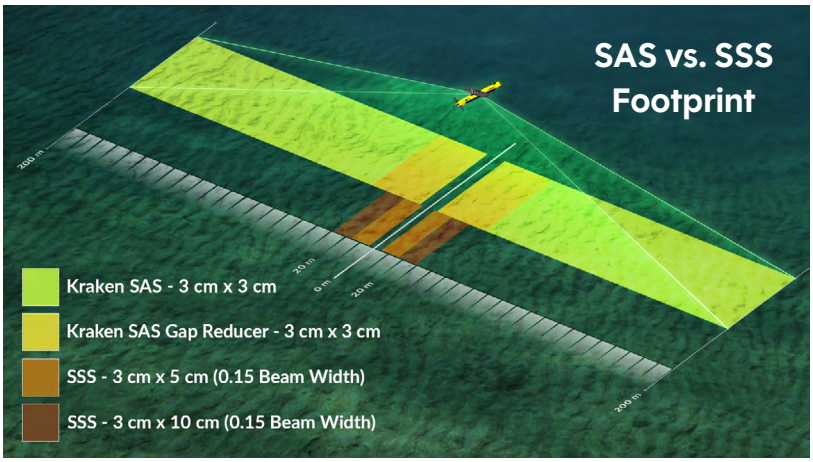


Anchor scours and small boat

KRAKEN ROBOTICS | KATFISH™

KATFISH Specifications

Operational Parameters		
Survey Altitude	5 m – 30 m	
Maximum Depth Rating	300 m	
Data	**Real-Time**	**Post-Processed**
SAS Along Track Resolution	3 cm	2 cm
SAS Across Track Resolution	3 cm	2 cm
Bathymetry Resolution	25 cm x 25 cm	
Data Formats	Kraken TIL, XTF, GeoTIFF, XYZ, HDF5, BMP	
Dual-Sided Data Rate	78.4 MB/s (330 GB/hr), 90% raw data, 10% processed	
Dual Frequency SAS		
Pulse Length	1 - 16 ms Configurable	
Pulse Bandwidth	40 kHz	
Pulse Center Frequency	337 and 105 kHz	
Stability		
SAS Robustness Against Yaw	±10° over 50 m track length	
SAS Robustness Against Sway	±0.2 m/s	
Max Crab Angle	20°	
Physical Characteristics		
Towfish Hull Dimensions	2.9 m length x 0.3 m diameter	
Towfish Wingspan	1.20 m	
Towfish Weight in Air	200 kg	
SAS Array Dimensions	180 cm x 7 cm	
Sensors and Equipment		
Standard Payload Sensors	Kraken SAS (Dual Frequency SAS, Bathymetry, Dynamically Focused Sidescan Sonar), Multi-Beam Echo Sounder (MBES) nadir gap filler	
Standard Navigation Sensors	Obstacle avoidance sonar, emergency locator beacon, doppler velocity log aided inertial navigation system, sound velocity sensor, pressure sensor, USBL beacon, flasher beacon	
Standard Equipment	32 U 19" Rack with real-time data processing and 28 TB solid state hard drive, 1000 m tow cable, Topside gigabit ethernet connection; Tentacle winch	
Optional Equipment	IS020 LARS, USV LARS, USBL positioning system	



Performance specifications represent maximum sensor values and may vary due to environmental conditions, vehicle stability, and operational specifics.

Design, features, and technical specifications are subject to change without notice.
V.051525