



WHAT WE DO

WITH



SALES AND SERVICES



**The Navigator of
Unmanned Surface Vehicles**



Water sampling
& monitoring

Water surface cleaning

Water Discharge
Measurement

Hydrographic Survey

Underwater exploration

Security & Defense

Oceanographic Survey

Fire fighting

About USV

USV (Unmanned Surface Vehicle) is a remote control or autonomous intelligent water surface robot which is able to fulfill multiple tasks. It is modular design with multiple function and safe replacement for human' s work.

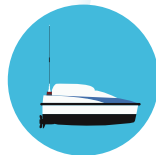
Autonomous Navigation & Intelligent Obstacle Avoidance

- Autonomous Navigation Control system with intellectual property right
- GNSS autonomous navigation due to obstacle avoidance technology and advanced navigation algorithm



Hull Material

- Composite material of carbon fiber, fiberglass and Kevlar fabric
- Separated cabin design; Water Proof 、 Anti-sinking 、 Anti-Capsizing



Intelligent Control Terminal

- Base Station-Map download 、 Mission planning and monitoring, Survey data acquisition, Boat control
- Remote Controller – Manual control, Mission and boat status



Green Energy

- High Capacity Lithiumion polymer battery
- Long endurance and safely packed



Data Communication

- Long distance radio communication
- Real time data and video transmission



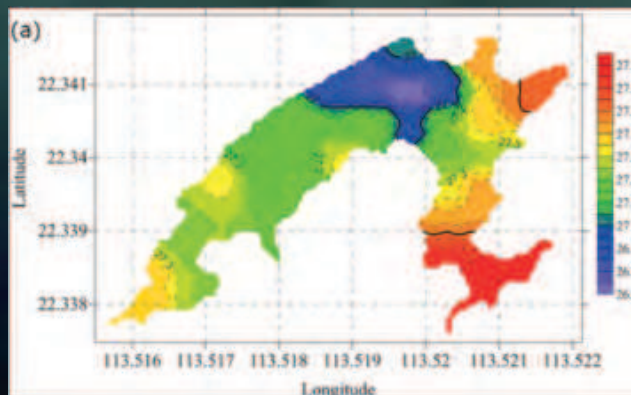
Multi-Mission Platform

- Universal Data interface, power supply and mechanical structure



Autonomous Standardized Water Sampling & Monitoring

Automatic water samples taking with tubing pump and compatible with different brand water quality sonde.



Water Quality contour map



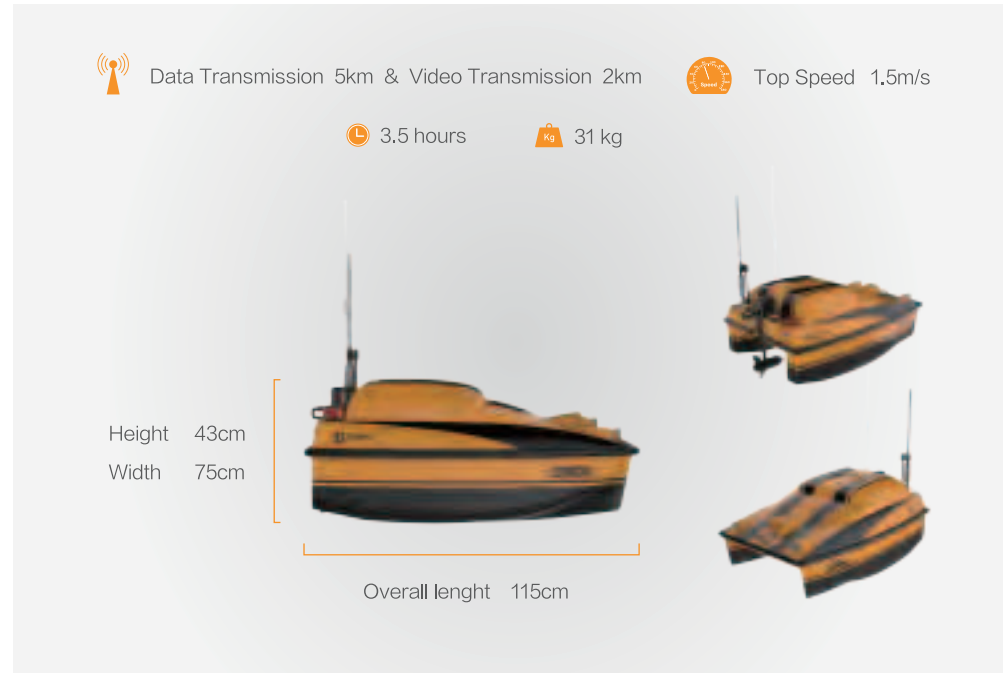
ESM30

Autonomous water sampling and monitoring boat

Autonomous water sampling and monitoring boat is plus version of sampling boat by adding online monitoring function with ability to integrate multi-parameters probe. Mostly applied in lake, river, estuary and costal area. It brings great efficiency in surface water quality monitoring and mapping.



Sampling capacity 4 x 1.8L



- Automatic Multi-point water samples taking and water quality monitoring
- Each sample's volume is configurable between 0–1800ml
- Able to integrate with water quality probe for online monitoring
- Parameters such as, Temperature, PH, DO, Conductivity, Turbidity, Chlorophyll, BGA, Chloride, Nitrate etc.
- Water quality monitoring data output and mapping
- Video monitoring and ultrasonic obstacle avoidance



Remote control boat with **ADCP**



SONTEK ADCP



RDI ADCP

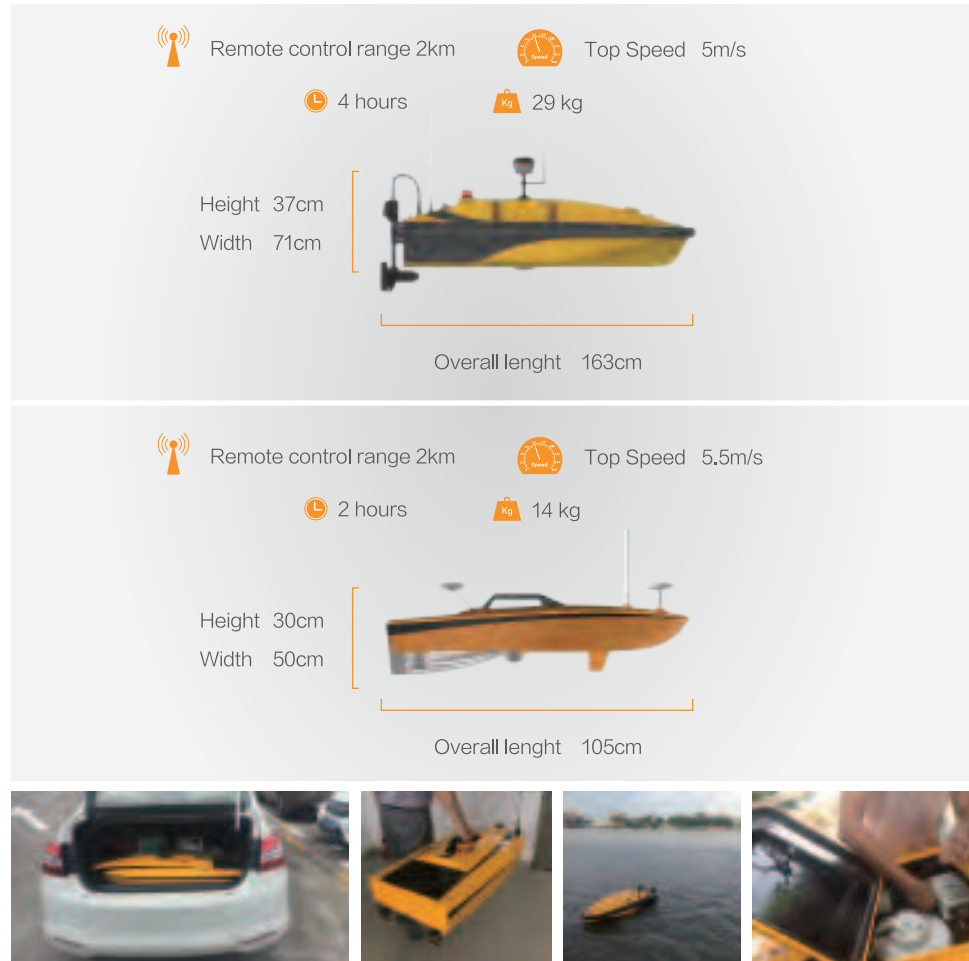


Linkquest ADCP

CL20 & CL40Y

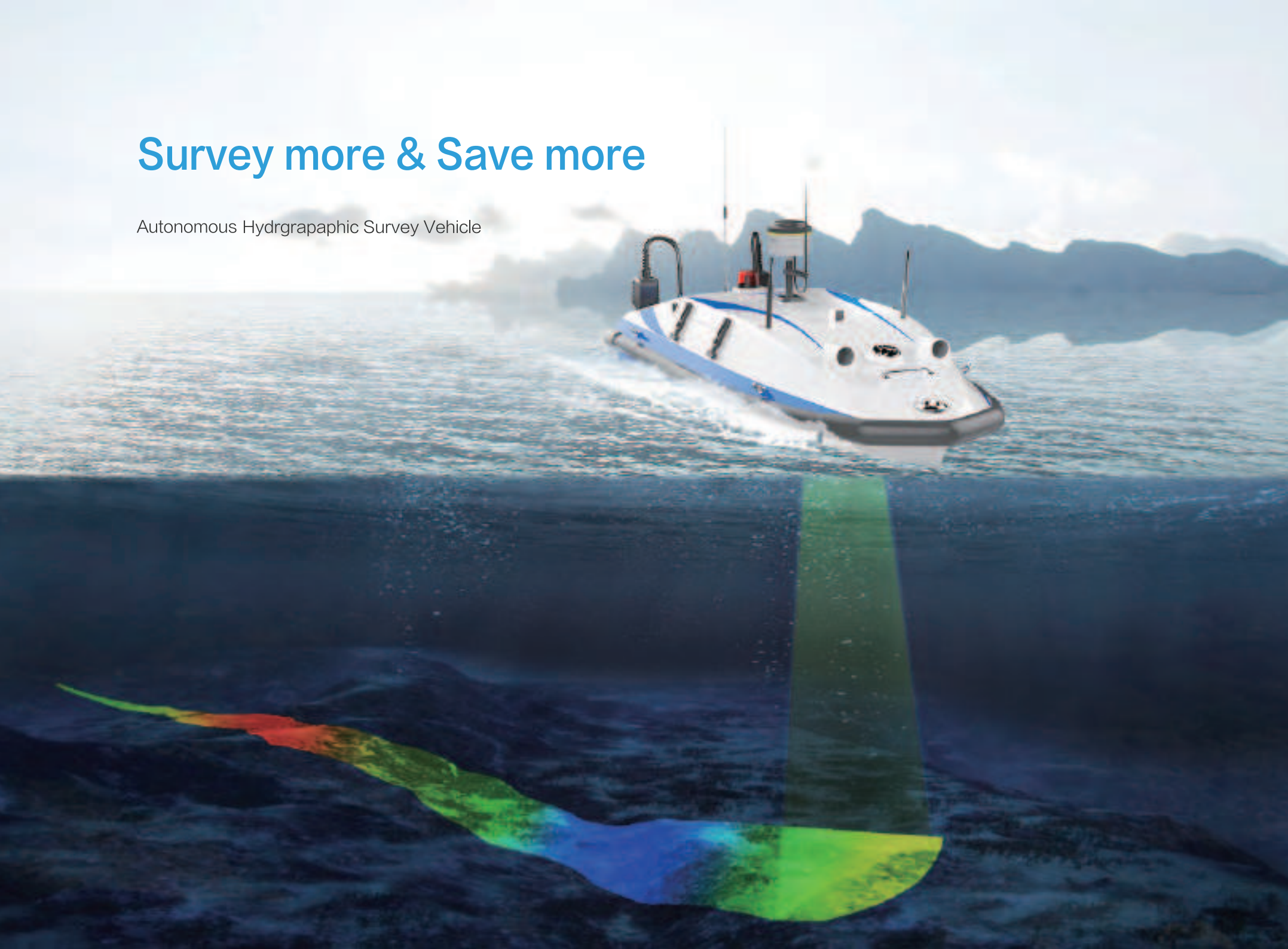
Remote control hydrology measurement boat

CL20 & CL40Y are designed for water discharge measurement and hydrographic survey. It compatible with different brand ADCP and single beam sonar, like RDI, Sontek, Linkquest and etc.. The boat is maneuverable with compact design, which makes it easily be operated by just one person. It could also be carried on the back of a SUV or a trunk. The maximum speed can reach 5.5m/s and 2km control range, so that the boat is suitable for most water current environment.



Survey more & Save more

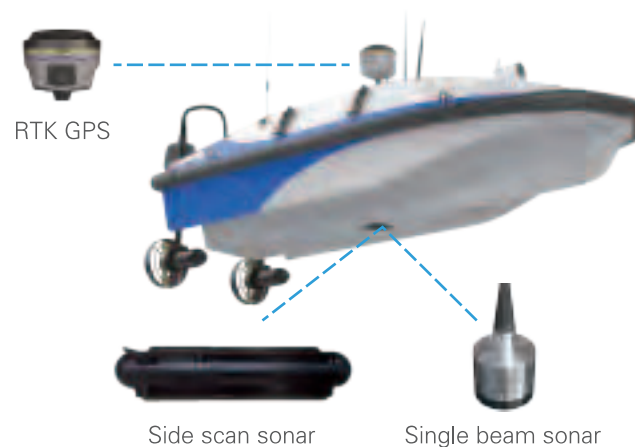
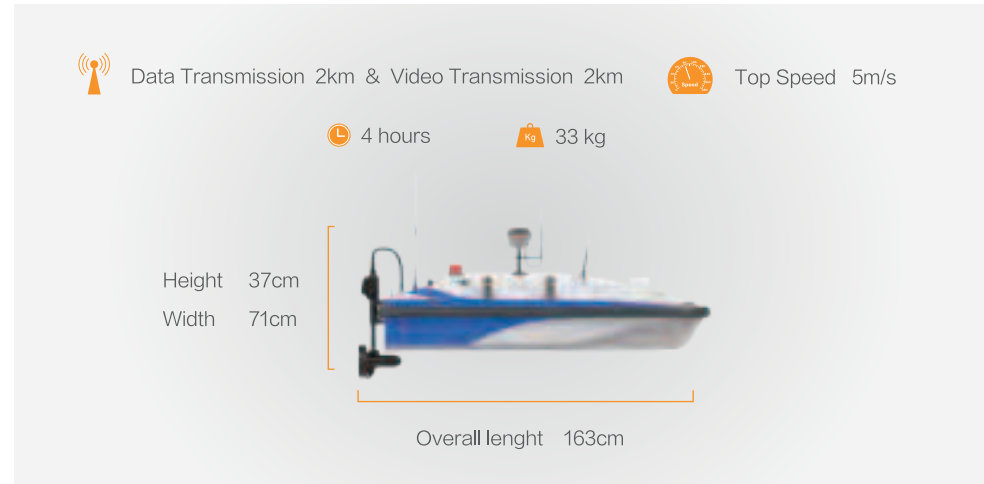
Autonomous Hydrgrapaphic Survey Vehicle



ME40

Autonomous hydrographic survey boat

Autonomous survey platform ME40 is designed for hydrographic survey with great efficiency. By replacing conventional workboat, autonomous platform is able to acquire bathymetry data without time-consuming and human safety risk. Mission planning, navigation control and real-time data acquisition are integrated in one package software, providing maximum efficiency to surveyors.



- Mission planning and autonomous survey
- Existing GNSS instrument can be installed
- Data acquisition integrated in USV software
- Customized option for other instruments
- Maximum 5m/s speed
- Excellent performance in shallow water

Big payload, Great Stability

Flexible payload installation and meets costal application



ME70 & ME120

Autonomous survey platform

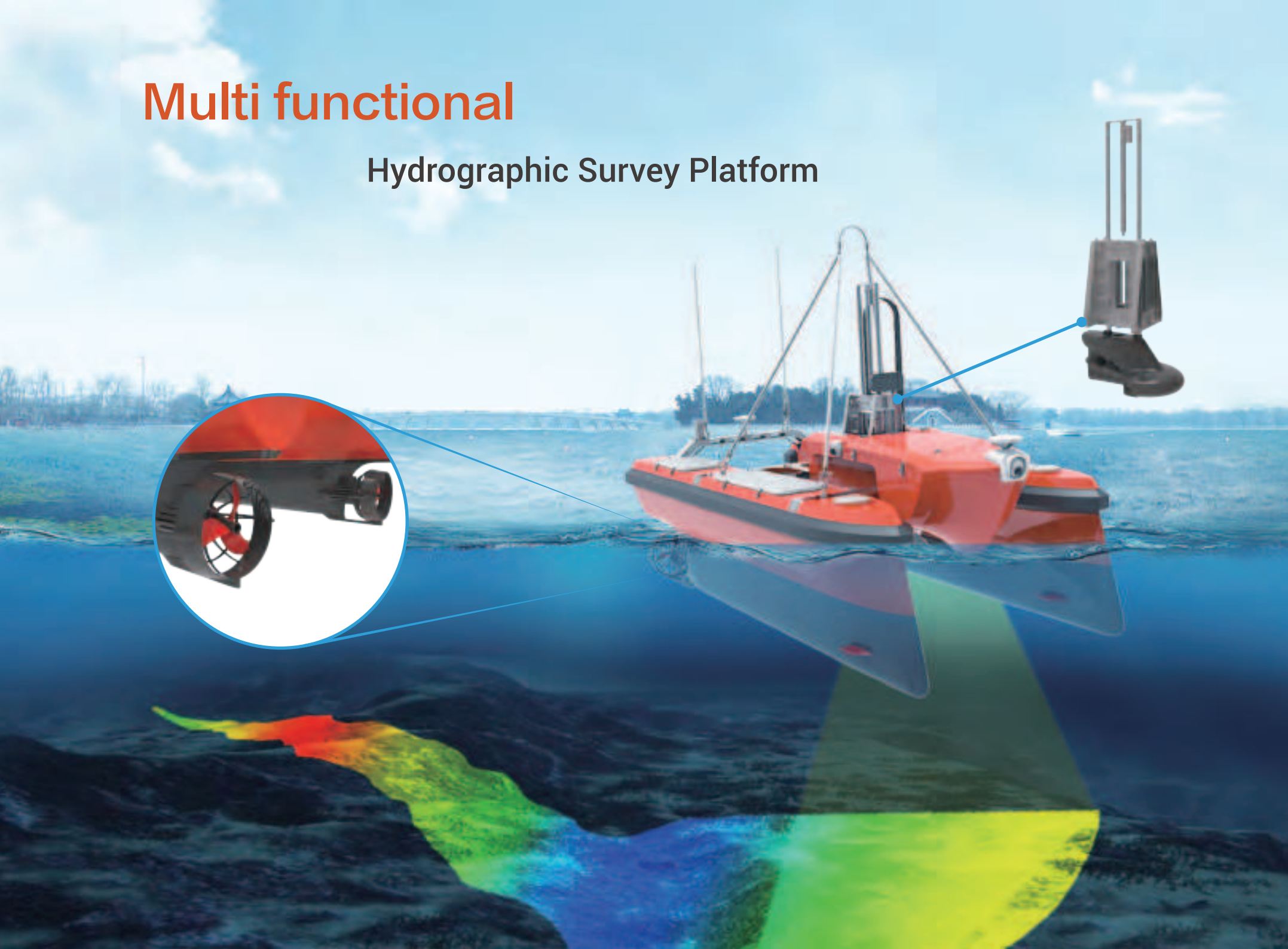
Autonomous survey boat ME70 & ME120 is medium size platform designed for hydrographic survey in harbor and costal area. With catamaran design and flexible payload for instruments, ME70 & ME120 was developed to provide surveyors and Service Company with multi-mission work in harbors or inland waters. Navigation control and real-time data acquisition are easily operated at base station computer. ME70 & ME120 is also a universal deployable platform to execute other mission like water quality monitoring and harbor surveillance.



- Mission planning and autonomous survey
- 60Kg/25Kg(ME120/ME70) payload for flexible instrument options
- Applied in river or costal area
- Customizable for various equipment (Muti-parameter probe, CCTV camera, ADCP, Side Scan sonar and etc.)

Multi functional

Hydrographic Survey Platform



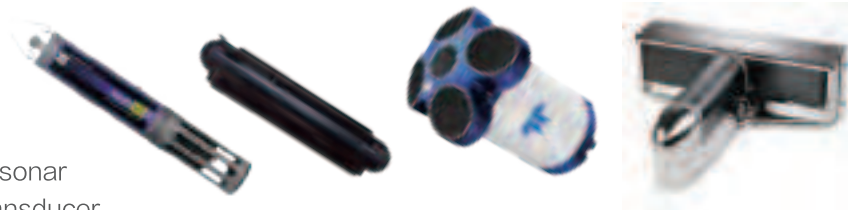
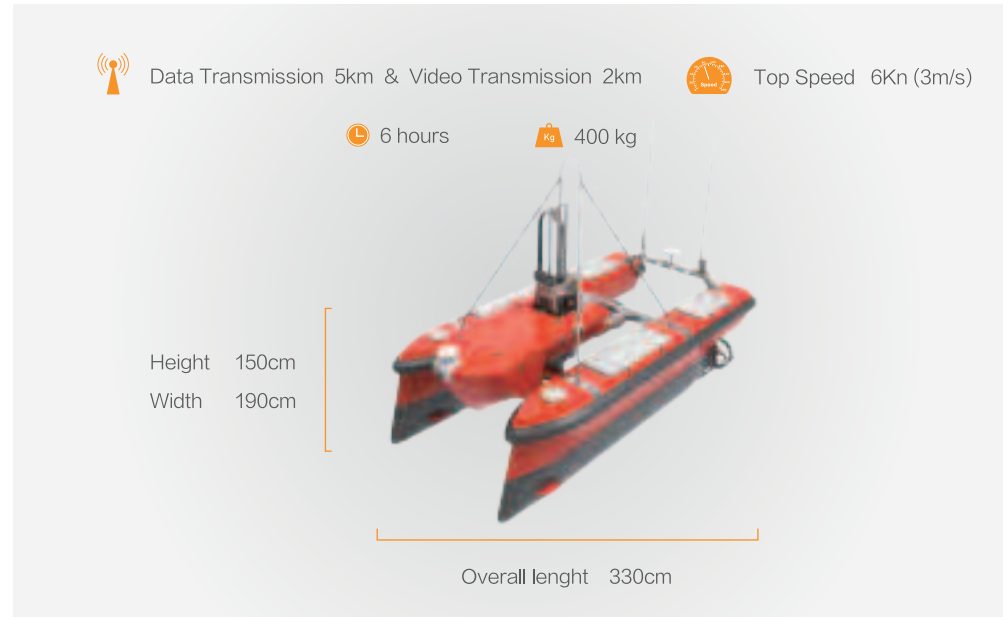
M40

Autonomous survey platform


Autonomous survey boat M40 is medium size platform designed for hydrographic survey in coastal area and deep ocean water. With modular catamaran design and flexible payload for instruments, M40 was developed to provide high performance survey with multi beam sonar and difficult kinds of hydrographic and monitoring instruments in ocean.



- 80kg payload, Compatible with multi-beam sonar
- Automatic lifting system, fully protect the transducer



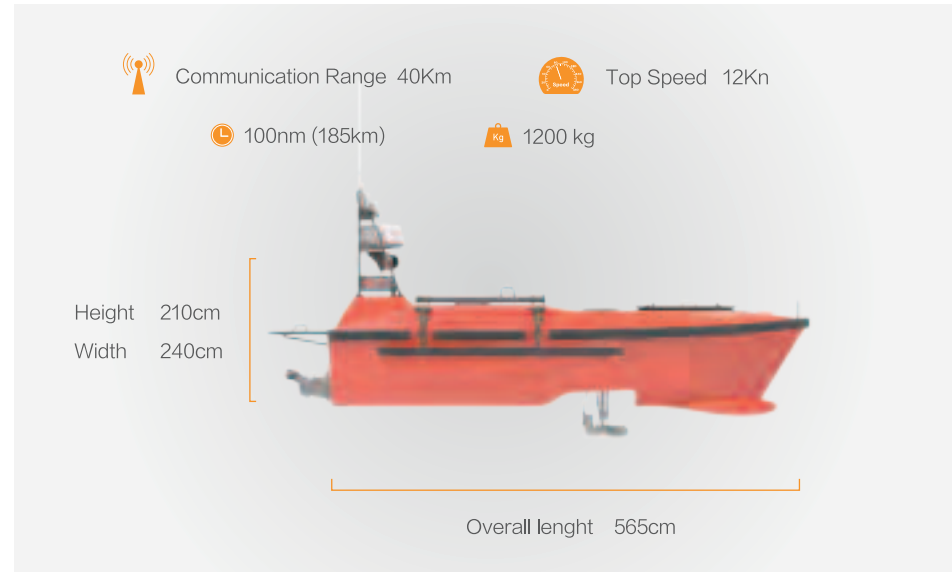
Maximum survey efficiency in *OCEAN*

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1. Precisely GPS navigating & autopilot
 2. Automatic Identification System (AIS) to identify target
 3. Equipped with Obstacle Avoidance Radar, Sensing Camera, Obstacle Avoidance Sonar, ensuring sailing safety & anti-collision both on the surface & underwater

M80B

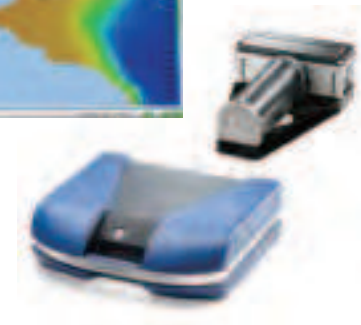
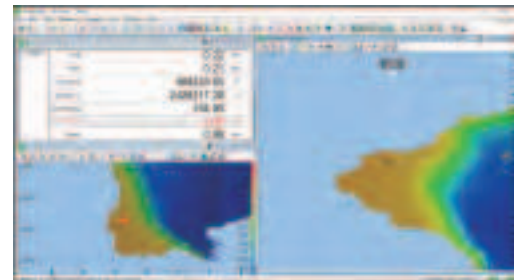
Autonomous survey platform

M80B unmanned survey boat platform was design to meet high requirement in hydrographic and oceanographic survey, the stabilization wing offer the best stability in ocean environment with minimum size of the boat. M80B platform is able to deploy and integrate with variety of instruments such as multi beam sonar, side scan sonar, sub-bottom profiler, gravimeter and magnetometer, water quality sensors etc. Autonomous navigation and obstacle avoidance provide efficient and safe operation.



Recommend Deployed Equipment

NO.	Description	Model NO.
1	Signal Beam Echo Sounder	Odom Echotrac CV200 / CV100 Haiying HY1601 / 1602 South SDE-18
2	Multibeam Echo Sounder	Reson T20 Odom MB1 / MB2
3	ADCP	Sontech M9/S5 RDI Ruijiang Linquest Nortek
4	Side Scan Sonar	Beijing Lanchuang Shark S450U
5	Forward-looking Sonar	BlueView M-450 Kongsberg M3
1	Online Multi-Parameter Water Quality Instrument	HACH DS5 / MS5 YSI EXO Series Sailhero XHFP / XHMP



Application Case



Demo in Sontek workshop, Greece.



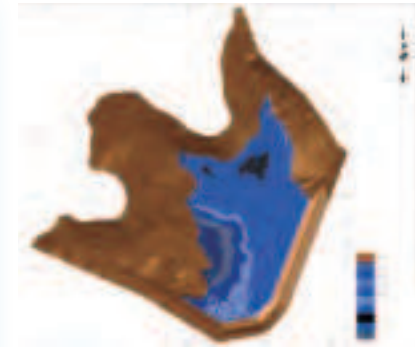
CL40Y equipped with Sontek M9 in Poland .



ESM30 monitoring water quality in Melbourne, Australia.



ESM30 demo in Florida, USA.



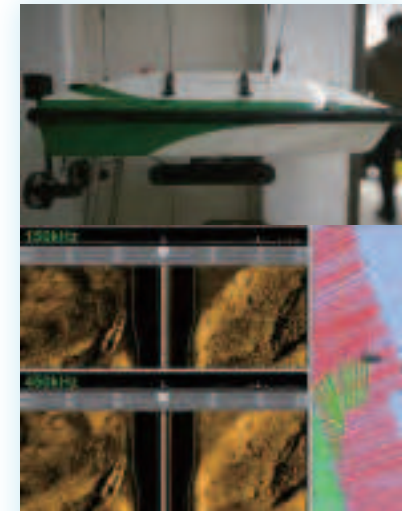
ME40 performs bathymetry survey job in a tailing dam pond in Peru .



ME70 survey the bed of island.

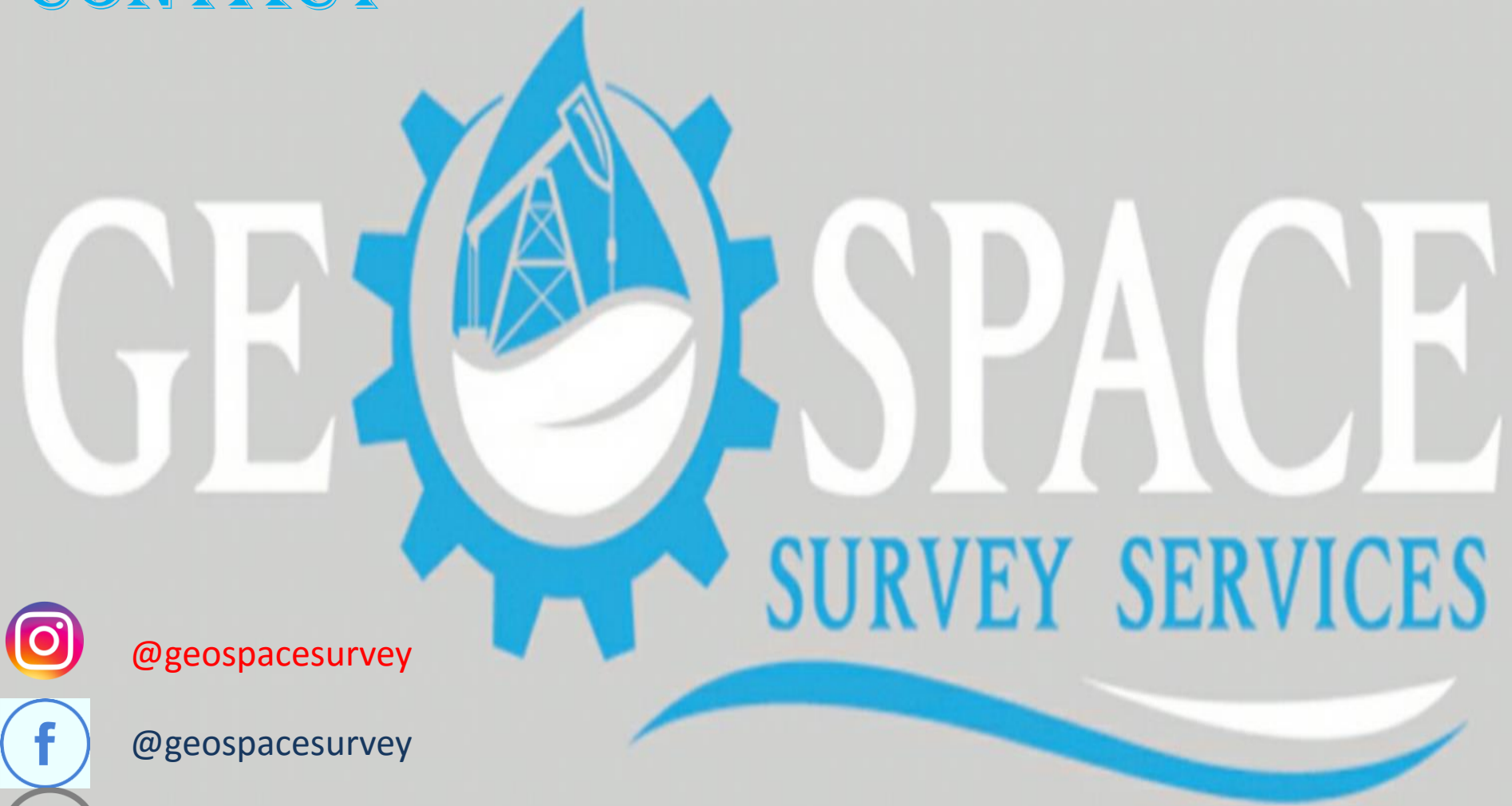


M80 during offshore survey.



Underwater exploration with Side scan sonar.

CONTACT



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