

NEMO110 Vessel

Unmanned Surface
Vessel Solution



NEMO110 Unmanned Surface Vessel

NEMO110 is an unmanned vessel system with integrated single-beam echosounder. Thanks to this versatile solution it is possible to carry out surveys and measurements in areas not reachable, or difficult to reach, by crewed ships such as shallow waters and coastal areas. NEMO110 can be used in underwater topographic surveying and mapping, hydrological surveying and underwater hidden pipe detection.

Super Power System

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

Smooth Sailing Performance

The vessel has a good seal at sea and in waterways thanks to its design.

Easy to Maintain

Modular design makes it convenient for quick installation and disassembly.

Anticollision Sensor

Avoid every obstacle. The anticollision sensor installed on the front of the vessel can detect an obstacle and stop the propellers.



GPS NAVIGATION

Thanks to a Stonex GNSS receiver, Nemo110 has an excellent on board real time navigation solution with high accuracy.



5 M/S SPEED

Brushless DC motor. Maximum Speed 5 m/s.



HIGH BATTERY CAPACITY

Long battery life 6 hours of continuous use.



SMALL AND LIGHTWEIGHT

Lightweight. Just 20 kg with battery and echosounder.
Dimensions: 1180 × 630 × 340 mm.



RUGGED

With IP67 Certification and Kevlar + carbon fiber material hull.





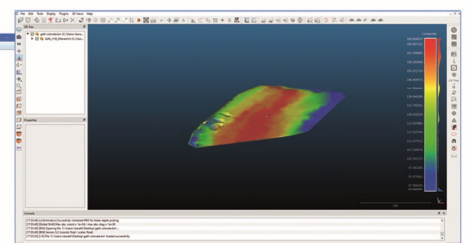
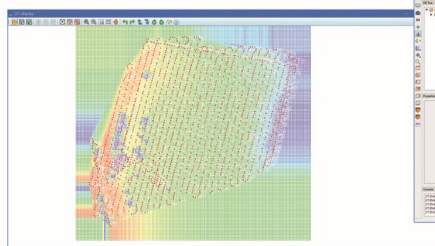
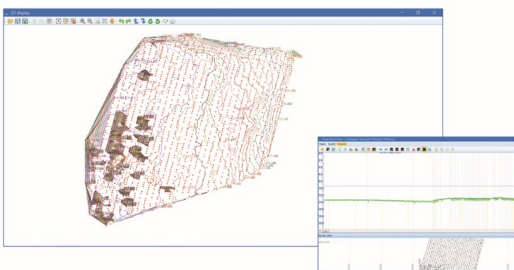
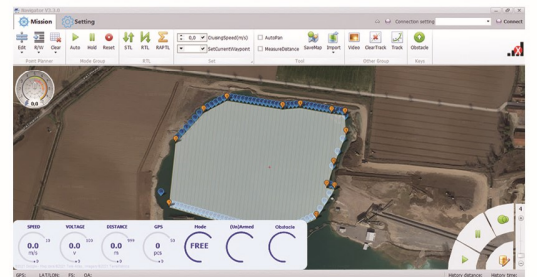
NEMO110

Software

The joint use of Navigation software and Bathymetry software provide the operator a full working procedure.

With Navigation software the operator could plan missions, trajectories and waypoints directly on the map both in manual and automatic way. The aquatic drone can complete the mission autonomously.

With Bathymetry software the operator checks the data collected by echosounder; at the end of the mission, he can elaborate them, improving the quality of the survey.



Applications

- Underwater topographic surveying and mapping
- Monitoring of small canals
- Monitoring of inaccessible areas
- Underwater pipes detection
- Surveying in shallow waters



NEMO110 TECHNICAL FEATURES

HULL

Size (w*h*d)	1180mm*630mm*340mm
Material	Kevlar + carbon fiber composite material
Weight	15kg
Standard displacement	25kg
Maximum displacement	30kg
Wind and wave resistance rating	Wind: 5 level Wave: sea state 3 level
Boat Type	M Type
Anti-settling design	Closed-cell foam filling and fully enclosed bulkhead anti-sink design
Camera	360° Panoramic camera
Navigation light	Two-color navigation lights

POWER

Battery life	6 hours at economy speed (1.5-2m/s)
Economy speed	1.5-2m/s
Max. speed	≥5m/s
Propeller motor type	Brushless DC motor
Propeller	Bypass propeller

NAVIGATION AND CONTROL

Navigation Mode	Manual mode/automatic mode/cruise control
Guided system	GPS/Beidou, RTK, or specified GNSS devices
Direction control	Differential steering
Lost protection	Automatic return when lost or low battery

COMMUNICATION

Communication mode	Dual communication (wireless point-to-point communication/network communication)
Communication distance	Bridge 3km/network communication long range
Hardware configuration	Support mainstream laptop/tablet Dedicated ground station (optional)
Base station operating system	Windows10 and better
Base station software	Support unmanned ship management, line management, status display, data management, log functions
Handheld remote control unit	(IP67) Waterproof and dustproof, digital HD map transmission, ultra-long link, ultra-long endurance

CARRYING DEVICE

Sensor	Single-beam echosounder Side-scan sonar ¹ ADCP ¹
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1. Available on request

Illustrations, descriptions and technical specifications are not binding and may change



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