ROBOMARINE
EXPLORE DEEPER !

RANAU-USV

BATHIMETRY USV (UNMANNED SURFACE VEHICLE) "RANAU"

Ranau-USV is an unmanned surface vehicle designed to replace large survey vessels in conducting survey missions or support missions where a compact and agile platform is essential for optimal mission execution, resulting in highly efficient bathymetric surveys.

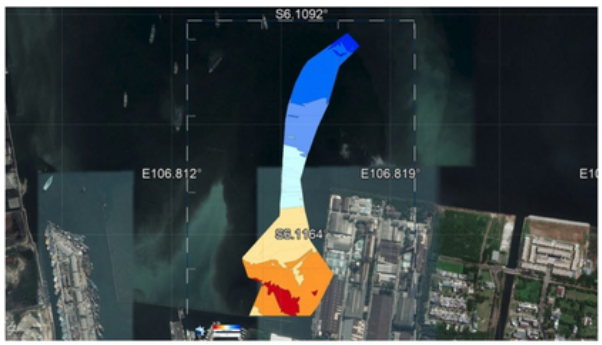
Ranau-USV utilized dual marine outboard electric engines and is capable of reaching speeds up to 5.14 m/s (10 knots). The Ranau-USV's modular and compact design facilitates surveys in challenging locations where conventional platforms may not be feasible.

Used to :

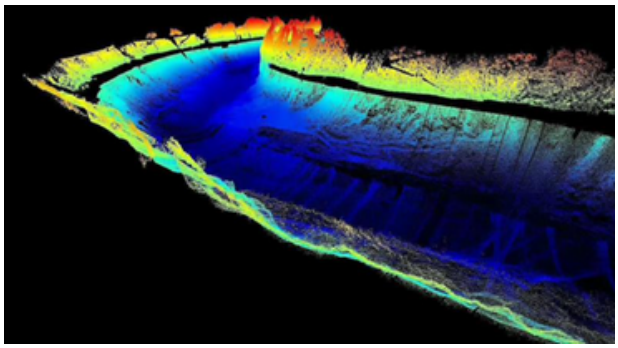
- Hydrography
- Search and rescue
- Oceanography
- Inspection and monitoring

Advantages :

- Stability and durability
- Versatile sensor integration
- Modular and compact platform



Ranau-USV Single Beam Survey Results



Ranau-USV Multi Beam Survey Results

PRODUCT SPECIFICATIONS RANAU-USV

Features:

- Modular and Compact Design
- Minimal Personnel Handling
- Autopilot Functionality
- Electric Propulsion System
- Real-time Telemetry and Monitoring
- Dual Control Modes (manual control using RC and autonomous mode)
- Integrated GNSS, Echosounder, and INS / IMU
- Automatic Track Planner

Technical Specification	
Dimensions	Length : 3 meters, Beam : 1.2 meters, Draft : 0.4 meters
Weight	50 kg fully assembled including battery
Speed Range	0-5.14 m/s (0-10 knots)
Propulsion	Dual Marine Outboard Electric Engines
Telemetry	up to 2 km radius
Endurance	6 hours full day survey
Ground Control System	Outdoor Rugged Laptop with Intel Core Family Processor

Basic Payload	
Dual Frequency Echosounder	30/200kHz or 50/200kHz. Lower frequency enable mud/ softer sediment measurement. 0.5 - 200 m range (higher range available by request). Data rate up to 100 Hz.
GNSS	Dual Frequency RTK. Centimeter-level accurate. GPS L1/L2, GLONASS G1/G2, BeiDou B1/B2, Galileo E1/E5b.