



SWALE OCEANOGRAPHIC

Unmanned Surface Vehicles - USV

(Autonomous or Remote Control)



This new range of autonomous boats allows efficient and safe monitoring, surveying and water-sampling. Several sizes (~1 – >4.0m, 10 - >300kg) are available with a choice of optional features and functions, suitable for the required task and intended location. An ADCP, Side Scan Sonar or Multi-Beam may be fitted to the hull and water quality sensors may also be included. In addition, a programmable sampling system can collect water into several bottles held on-board, contained in an easily removable carry-case. The quiet electric motors which can be turn off, make them ideal for noise monitoring amongst other applications.

Intelligent navigation system

- Simple way-point programming
- Autonomous navigation algorithm
- High accuracy GNSS (RTK-GPS)
- High accuracy gyro for inertial navigation system
- Automatic obstacle detection and avoidance

Real-time communication

- Operation, attitude and mission status of USV
- Measurement data of hydrology, water quality and others
- Real-time video with WiFi or 4G

Professional hull design

- Catamaran hull design ensure stability
- Anti-corrosive, sealed & waterproof
- Compact, light, reliable and convenient

Clean energy

- High capacity lithium polymer battery, safe and clean
- Modular design with patented, integrated powerful propeller and servo
- Long endurance (3-12 hours), convenient to recharge
- Petrol / Electric hybrid available

Handheld remote-control

- Intelligent Android OS, expandable function
- Real-time communication
- Manual operation
- Mission assignment
- Status monitoring

Base Station

- Data storage and management
- Data analysis, Automatic report generation
- Distribution mapping
- Measurement data acquisition, display and storage
- Mission planning & reporting
- Optional relay station to extend communication range
- Real-time multi-angle video
- Satellite map download and management



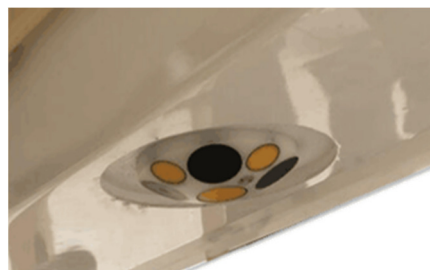
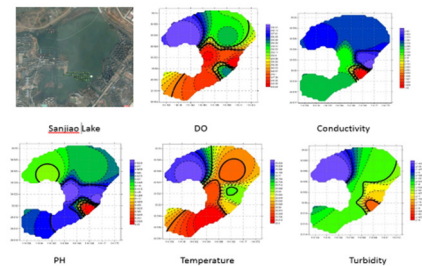
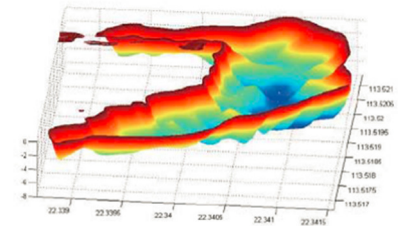
Applications

Bathymetric survey
Flotsam collection
Hazard location
Hydrographic mapping
Radiation monitoring
Security patrol
Under-water searches
Water flow measurement
Water quality / pollution monitoring
Water sample collection



Features

Autonomous navigation by GPS waypoints
Compatible with ADCP and single beam sonar
Deployable by 1 -2 people.
Inland water or Coastal applications
Live video telemetry
Manoeuvrable, compact, light and robust.
Obstacle / Collision avoidance
On-board instrument / sampling bay
Real-time data
Strong Kevlar / Carbon-fibre hulls



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