



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 (1.15 – 4.0m) are available with a choice of optional features and functions, suitable for the required task and intended location. An ADCP or single beam sonar 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.



Intelligent navigation system

- Simple way-point programming
- Autonomous navigation algorithm
- High accuracy GNSS (GPS, BDS, Glonass, Galileo)
- 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 (3-12hours), 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

- Mission planning & monitoring, Data analysis, Automatic report generation
- Real-time working status, attitude state and mission status of USV
- Real-time multi-angle video
- Data storage and management
- Satellite map download and management
- Measurement data acquisition, display and storage
- Distribution mapping
- Optional relay station to extend communication range



Applications

Above-water security
Bathymetric survey
Hazard location
Hydrographic mapping
Surface garbage collecting
Under-water searches
Water flow measurement
Water quality / pollution monitoring
Water sample collection

Features

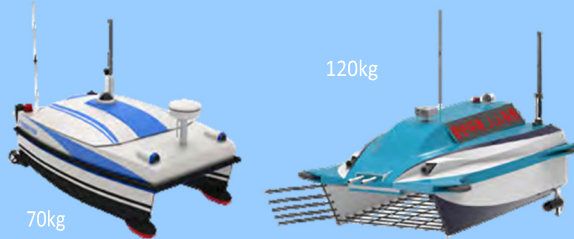
Ad hoc USV network technology
Autonomous navigation & obstacle avoidance
Compatible with ADCP and single beam sonar
Human-computer interaction technology
Long-distance real time video communication
Manoeuvrable, compact, light and robust.
On-board instrument bay with data telemetry
Real-time data
Small versions easily operated by one person.

Small



- Hydrographic mapping
- Water sampling
- Water quality monitoring
- Water flow measurement

Medium



- Hydrographic survey
- Nuclear radiation monitoring
- Surface garbage collecting
- Versatile mobile sensing platform

Large



- Hydrographic survey
- Marine Security
- Ocean engineering survey
- Resources exploration
- Search and rescue
- Underwater exploration



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