

HyDrone™

Unmanned Surface Vehicle

Seafloor™



TRANSPORTATION AND DEPLOYMENT

HyDrone™ is one person portable, allowing easy access to remote and dangerous areas. The lightweight, wide-profile, and watertight construction provide stability and ruggedness. HyDrone™ is manufactured from high-quality marine materials and easily disassembles for transport and shipping.

SEMI-AUTONOMOUS AND REMOTE CONTROL

Remote control of HyDrone™ is easy using a long-range, remote control unit (RCU). The RCU offers up to 2km range with a survey endurance of over eight hours at a speed of 3 knots on a single battery bank.

Key Features:

- Monitor the vessel underway in both Auto and Manual modes.
- Maneuver easily with powerful differential thrusters.
- HyDrone™ is semi-autonomous with the AutoNav™ Control System.
- Mission Planner runs on a base station laptop connected through a radio telemetry link. Real-time geographical position and progress are displayed against a background map of the survey area. Battery, voltage, current, and capacity remaining is also monitored with this link.

DATA COLLECTION

All data is stored via an on-board PC with a direct cable connection.

SOFTWARE COMPATIBILITY

HyDrone™ is compatible with hydrographic data acquisition software such as Hypack, Carlson, EPOCH, Leica, Sokkia, Topcon, and Trimble.

CUSTOMIZATION

While HyDrone™ is compatible with most survey systems, HydroLite™ Portable Echosounder Kits are well-suited for the catamaran. The rugged HydroLite-TM and the HydroLite-DFX look and feel like traditional survey instruments, quickly measuring and logging depths more accurately than standard systems.

- The desired depth sounder can be pre-installed or supplied ready to accept existing equipment from the user's survey pool.
- HyDrone™ can be outfitted with singlebeam, multibeam, sidescan sonar systems and ADCPs.
- Maintain line & fixed heading for ADCP Surveys.
- For professional hydrographic survey requirements, HyDrone™ may be tailored for individual customer specifications. Additional features are available, please contact your Seafloor representative.

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The HyDrone™ is a lightweight and unmanned surface catamaran developed for hydrographic survey applications.

This highly economical platform provides the same survey results as more expensive remote-controlled survey systems.



One Man Portable



Differential Thrusters



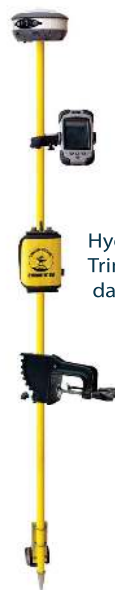
AutoNav™ Control System



Preplanned survey using Mission Planner



Survey data overlay using Mission Planner



HydroLite-TM™ with Trimble GPS and data collector



HyDrone™ ASV with Trimble SPS 585 and TSC3

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Specifications

Typical Survey Speed	2 - 3 kn
Top Speed	6 kn
Hull Length	116 cm / 45.6 in
Hull Width	21cm / 8.2 in
Hull Material	UV Resistant HDPE
Hatches	4 x 7" Twist-Out Watertight Closure
Frame	Aluminum Powder Coated
Hardware	Stainless Steel
Empty Hull Weight & Batteries	9.8 kg / 25 lbs
Battery Endurance	8 hours at Survey Speed
Payload	15 kg / 35 lbs
Power	2x 14.8 vdc 16 Ah Battery LiPo
Motor	2 x Brushless Thruster
R/C	2.4 GHz/900MHz Long Range RCU (US) 2.4 GHz/868MHz Long Range RCU(EU)
Remote Range	Up to 2 km
ECU (Electronic Controller Unit)	2 x 120 amp

Instrumentation Options

Auto Pilot Module	AutoNav™ Control System Built-In Telemetry System Embedded GPS and Compass
HydroLite-DFX™	Dual Frequency Echosounder 200 / 30 KHz
HydroLite-TM™	HydroLite™ Pole Kit
PC Laptop	SonarMite™ MILSpec Echosounder
Radio Telemetry	Rugged Shipping Case
RTKGPS	Mission Planner Application USB Radio Telemetry

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