

Seafloor™ datasheet

EchoBoat™ Unmanned Surface Vehicle

The EchoBoat™ is an unmanned surface vehicle developed for hydrographic survey applications. This is a multi-payload, remotely controlled and autonomously controlled survey platform featuring portability, improved thrust, and large payload capacity.

The vehicle can be monitored while under way, in both Auto and Manual modes, while within line-of-sight range and over the horizon with additional hardware. Runs onboard PC, via direct cable connection via and displays the vehicles graphical positioning and progress against a background map of the survey area. Battery voltage, current and capacity remaining can be monitored.

- ▶ *Remote Controlled or Autonomous*
- ▶ *Custom instrumentation to client's requirements*
- ▶ *Easily switch to remote operation*
- ▶ *Access to remote areas*
- ▶ *Turnkey operation*

Switching from autonomous to remote control on the survey boat is easy using a long range remote control system that offers up to 2km range, with a survey endurance of over eight hours on a single battery back.



EchoBoat™ RCV with WiFi Antenna

For professional hydrographic survey requirements, the EchoBoat™ may be tailored to individual customer requirements. The boat may be purchased with the desired depth sounder pre-installed, or supplied ready to accept existing equipment from the user's survey pool. Similarly, customized cabling can be included allowing the boat to accept existing GPS, GNSS and RTK positioning systems. For a turnkey survey-grade system, the EchoBoat™ can be outfitted with singlebeam, multibeam and side scan sonar systems.

The EchoBoat™ is compatible with hydrographic data acquisition software such as Hypack, PDS2000, EIVA and QINSy.



Lightweight and 2-man portable



Powerful differential thrusters for maneuverability



PicoMBES-120SF

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Specifications

Typical Survey Speed.....	2/3 kn
Top Speed.....	5 kn
Hull Length.....	1.8 m
Hull Width.....	0.8 m
Battery Endurance.....	Up to 8 hours
Payload.....	65 lbs / 29 kg
Power.....	12-24 VAC
Motor.....	Brushless DC Outdrive
Hull Material.....	UV Resistant HDPE
Empty Hull Weight & Batteries.....	23 kg/ 36 lbs
Hardware.....	Stainless Steel
R/C.....	RCU 2.4 GHz long range
Remote Range.....	Up to 2 km optional or direct connection
GPS.....	Customer Specified
Communications.....	2.4 GHz UHF Telemetry

Instrumentation Options

Sonar Modules

- Multibeam Echosounder*
- Singlebeam Echosounder*
- ADCP*
- Side Scan Sonar*
- Subbottom Profiler*
- Magnetometer*

GPS/GNSS

- RTK/GNSS*
- DGPS*
- INS*

Auxiliary Sensors

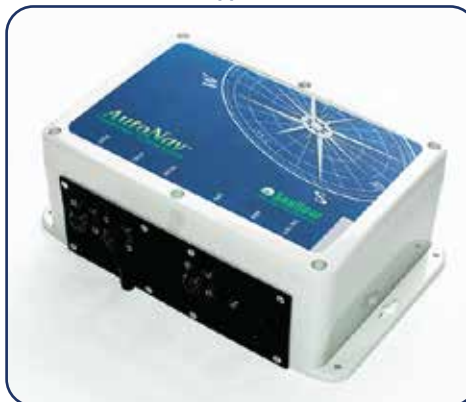
- Sound Velocimeter*
- Velocity Profiler / CTD*
- Wi-Fi Remote Desktop*
- HD Thermal Camera*
- Remote SV Winch*
- LiDAR*

EchoBoat™

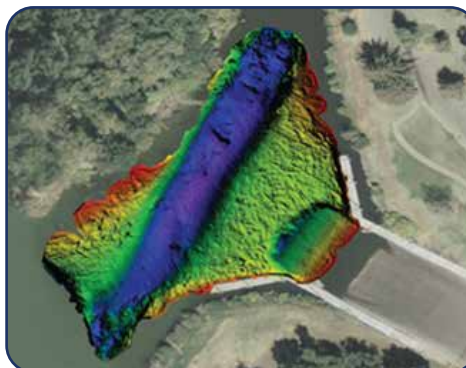
Unmanned Surface Vehicle



R2 Sonic MultiBeam, Applanix POS MV Surfmaster



AutoNav™ Control System



Survey data collected through Mission Planner on PC laptop



Mission Planner Installed on a PC laptop showing preplanned survey

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