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Environmental
Monitoring



Surfbee | Autonomous Surface Vehicles

Delivering high-resolution water quantity and quality data using industry-leading sensors



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Surfbee

Flow Seeker and Flow Scout

Modular, high-performance autonomous surface vehicles designed for water quantity and quality monitoring. Built with a rugged inflatable hull, they feature dual GNSS with heading for reliable navigation, precision thrusters for consistent transects, and onboard batteries that can power connected sensors.

Surfbee also includes a high-definition camera with live video feedback to support field operations. Missions can be carried out autonomously or manually using the Surfbee app and long-range controller with Bluetooth and 4G connectivity.



Benefits



Autonomous missions are easily completed via the Surfbee app. Tap to set waypoints, adjust speed, and run missions, or return home



Sensor-agnostic platform supports ADCPs like the SonTek-RS5 and M9, and water quality instruments like the YSI EXO Sonde



Built-in dual GNSS with heading ensures precise positioning and accurate geo-referenced data



Lightweight yet powerful, the inflatable hull is easy to transport and built for fast-moving and challenging water conditions



Reliable system design includes steering redundancy, power-efficient motors, and a long-range, weather-resistant transmitter



Safer deployment reduces time on boats or wading through water while replacing days of manual work with a single mission



Surfbee model options

Surfbee offers two models: the **Flow Seeker**, a versatile and portable workhorse for a wide range of gauging conditions, and the **Flow Scout**, built for shallow waters with angled thrusters that enable precise lateral movement in challenging environments.

Both models include:

- Flow board
- Power pod
- Dual GNSS with heading
- Propeller system
- Remote control with touch screen
- 1 km range with Bluetooth and 4G connectivity
- Surfbee app
- Integrated HD camera with live video
- RTK base
- Instrument mount
- Gear bag

Flow Seeker



Specifications

Max speed	4 m/s (3 m/s cruise)
Minimal depth	0.25 m
Weight (without batteries)	13.5 kg
Sensor integration	Multiple payloads up to 10 kg
Dimensions	L: 1.65 m W: 0.75 m H: 0.10 m
Underwater thrusters	3
Compatibility	SonTek-RS5, SonTek-M9, YSI EXO Sonde, and third party sensors

Flow Scout



Specifications

Max speed	1.8 m/s (forward) 0.8 m/s (lateral)
Minimal depth	0.14 m
Weight (without batteries)	11 kg
Sensor integration	Multiple payloads up to 8 kg
Dimensions	L: 1.35 m W: 0.70 m H: 0.10 m
Underwater thrusters	3
Compatibility	SonTek-RS5, SonTek-M9, YSI EXO Sonde, and third party sensors
Lateral movement	Yes

Flow Sled

The Flow Sled is a rugged, floating module designed to bolster stability and performance in demanding flow environments. This accessory provides all the benefits of a larger vessel without sacrificing portability or storage convenience.

The Flow Sled is only compatible with the Flow Seeker.



Your complete solution for water surveying

The Surfbee Flow Seeker and Flow Scout are versatile, portable surface vehicles designed to tackle a wide range of hydrographic and environmental monitoring applications. Whether you need high-precision mapping and real-time data. Surfbee delivers reliable performance across diverse aquatic environments.



Improved transects — Precise navigation and positional accuracy, along with intuitive station setup, yield reliable transect repeatability



Return home — Quickly return to the start position at any time during a mission or if the battery is low



Waypoint planning — Create a boundary by driving the boat around or drawing on the map, then adjust the angle and density of your plan



Position hold — Thrusters make constant adjustments to remain in a precise location without drifting in the current



Remote control — Intuitive driving controls, exceptional maneuverability, and fast speeds make it easy to navigate a range of environments



Real-time course correction — Adapt to changing flow conditions, ensuring consistency and data quality

Focus on the data, not the deployment

YSI services supports your water monitoring program from design to data delivery, so you can focus on water quality, stormwater, HABs, or other monitoring goals.

[Contact YSI Services](#)



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