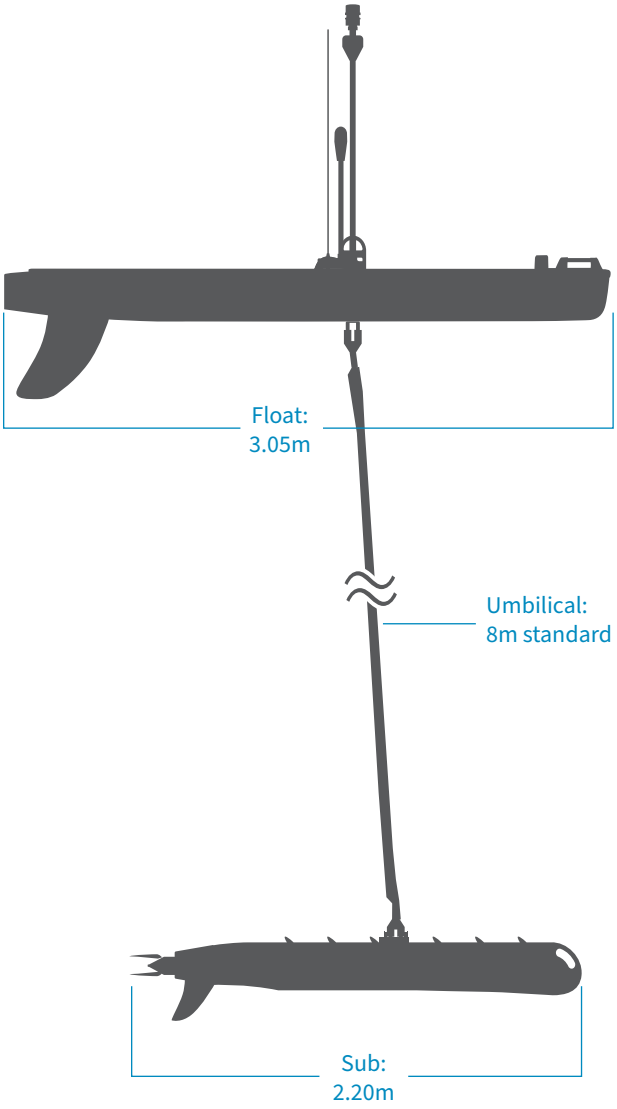
The Wave Glider

SV3 v300 Platform

The Wave Glider revolutionizes how we explore and understand the world's oceans by gathering data in ways or locations previously too costly or challenging to operate. Powered by wave and solar energy, the Wave Glider is an uncrewed surface vehicle (USV) that operates individually or in fleets delivering real-time data over long durations.



Key Specifications

Max. Mission Duration	Up to 1 year*
Minimum Water Depth	> 15m w/ 8m standard umbilical
Station Keeping	30m radius**
Speed	Typical: 1.3kts
Payload Capacity	7 modular bays (93L)
Payload	6 locations: mast, in float, below float, mount to sub, tow from sub, tow from winch (integration option)
Tow Capability	500kg (1,100lbs drag dependent)
Average Continuous Power	5 – 20W (surge capability available)
Max Solar Collection	192W (nominal)
Battery Capacity	0.9 – 6.8kWh rechargeable
Communication	Cell, Satellite, Wi-Fi

* Mission duration varies based on operating conditions and location; maintenance recommended every 4-6 months.
** Based on previous missions, observed station-keeping 90% of time (subject to sea state and navigation modes).

LIQUID ROBOTICS
A Boeing Company

+1 408 636 4200 www.liquid-robotics.com info@liquid-robotics.com

LIQUID ROBOTICS
A Boeing Company

SV3 v300 Platform Details

GENERAL

VEHICLE CONFIGURATION

Float and sub joined by 8m (26ft) umbilical tether

FLOAT DIMENSIONS

(L x W x H, with recovery buoy attached):

305cm x 81cm x 23cm

120in x 32in x 9in

UMBILICAL

8m standard

SUB DIMENSIONS

(L x W x H)

220cm x 145cm x 33cm

87in x 57in x 12in

WEIGHT[1]

(Dry, without payloads)

Float: 71kg (157lbs)

Sub & umbilical: 84kg (185lbs)

Total: 155kg (342lbs)

MAX. MISSION DURATION

Up to 1 year[2]

WATER SPEED

Typical: 1.3kts

MINIMUM WATER DEPTH

>15m with 8m standard umbilical

OBSERVABILITY

Low noise propulsion system

Minimal visual/radar signature

Optional flag and marker light

Optional placards

PAINT COLOR

Copper/patina

POWER

PROPULSION

Conversion of wave energy into thrust

Electric thruster for additional speed and control

AVERAGE CONTINUOUS POWER

5W-20W (surge capability available)

BATTERY CAPACITY

0.9-6.8kWh rechargeable

MAX SOLAR COLLECTION

192W (nominal)

INSTRUMENTATION

WATER SPEED SENSOR

Airmar DX900+

AIS RECEIVER

Shine Micro

WEATHER STATION

Airmar 200WX WeatherStation®

OTHER

Selection of optional sensors available (wave height, camera, etc.)

NAVIGATION

HEADING

Solid state magnetometers

AHRS including 3-axis accelerometer, magnetometer and gyro

GPS

12 channel WAAS capable

STATION KEEPING

30m radius[3]

COMMUNICATIONS

SATELLITE

Iridium® 9603 - Short Burst Data

Iridium 9522B - RUDICS (option)

CELLULAR

GSM communications (3G)

LOCAL

802.11ac Wi-Fi/Ethernet

SAFETY

EMERGENCY LOCATION

Optional shore-activated light

2-Year redundant Iridium tracker

HEALTH SENSORS

Pressure and temperature sensors in payload boxes

BATTERY

Automatic charge/discharge cut-off (for temperature and/or voltage)

PAYLOADS

ARCHITECTURE

Extensible payload design

Open standards software for sensor integration

Pressure-rated O-ring sealed connectors

MAX DISCRETE PAYLOADS

7 modular payload units

SENSOR PLACEMENT

6 locations: on mast, in float, below float, mount to sub, tow from sub, tow from winch (integration option)

TOWING CAPABILITY

500kg (1,100lbs, drag dependent)

MAX PAYLOAD WEIGHT

59kg (130lbs)

MAX PAYLOAD VOLUME

93L (3.3cf)

OPERATION

MISSION CONTROL

Chart-based GUI

Waypoint & course generation

STATUS MONITORING

Text & visual status indicators accessible via web interface

SMS[4] and email alerts

Programmable inclusion and exclusion zones

AUTONOMOUS NAVIGATION

Programmable waypoint course

Follow course and hold/loop

Station keeping at target

Vessel detection and avoidance (based on AIS)

MISSION DATA

Continuous real-time and historical data available

SHIPPING

RAPID STAND

292cm x 90cm x 78cm
115in x 35.5in x 30.5in
86kg (190lbs)

RAPID CRATE

303cm x 110cm x 112cm
119in x 43in x 44in
Empty Weight: 272kg (600lbs)
Max Gross Weight: 726kg (1600lbs)

Air freight on wide-body jets

Wooden crates also available

[1] Varies based on vehicle configuration
[2] Mission duration varies based on operating conditions and location; maintenance recommended every 4-6 months.
[3] Based on previous missions, observed station-keeping 90% of time (subject to sea state and navigation modes).
[4] Check availability with your provider.

Rev. 3.1