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

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

* 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).
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
(Dry, without payloads)
- Float: 71kg (157lbs)
- Sub & umbilical: 84kg (185lbs)
- Total: 155kg (342lbs)

MAX. MISSION DURATION
Up to 1 year2

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 radius3

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
SMS4 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

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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.

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