Data Xplorerer
Research and Maritime Domain Awareness USV

FEATURES
- Electric propulsion for near-silent operation
- 360° camera feed transmitted in real-time
- Patent-pending self-righting hull
- Ruggedized for hurricane conditions
- Solar harvesting for extended operations
- Six-month continuous operation capacity
- Satellite/cellular/radio communications
- Real-time encrypted data transmission
- Autonomous or remotely operated

APPLICATIONS
- Increased maritime domain awareness
- Persistent data collection for research
- Surveillance of Marine Protected Areas (MPA)
- Multibeam surveying and seafloor mapping
- Marine mammal monitoring and detection
- Protection and enforcement of marine laws
- Communication relay for subsea sensors
- Substitution of crewed vessels in risky operations
- Millions of kilograms of GHG savings

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# Data Xplorer Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>LENGTH</strong></td>
<td>3.56 Meters (11.66 feet)</td>
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<tr>
<td><strong>BEAM</strong></td>
<td>0.89 Meters (35 inches)</td>
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<tr>
<td><strong>DRAFT</strong></td>
<td>0.46 Meters (18 inches)</td>
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<tr>
<td><strong>DRY WEIGHT</strong></td>
<td>82 kg (184 lbs)</td>
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<td><strong>PAYLOAD WEIGHT</strong></td>
<td>75 kg (165 lbs)</td>
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<td><strong>PROPULSION</strong></td>
<td>1.1 kW / 2.0 kW / 4.0 kW exchangeable pod motor</td>
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<tr>
<td><strong>SPEED</strong></td>
<td>8 knots with base motor - 18 knots with 4.0</td>
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<tr>
<td><strong>COMMUNICATIONS</strong></td>
<td>Satellite, 3G/4G cellular, and 900 MHz radio</td>
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<tr>
<td><strong>HULL MATERIAL</strong></td>
<td>Carbon fiber and S-glass</td>
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<tr>
<td><strong>SOLAR POWER</strong></td>
<td>300 Watts</td>
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This uncrewed surface vehicle (USV) is designed for persistent continuous operations of up to six months. It is engineered to withstand hurricane-force conditions and is self-righting. The vessel is maneuverable enough to be used or launched in congested nearshore environments, while its energy harvesting abilities and efficient drive system allow it to work indefinitely when conducting low-power operations. A modular battery system of up to 10.5 kWh allows it to conduct high-powered operations such as multibeam surveying continuously for up to 40 hours.

**Solar Panels**
An array of up to 400 watts can be installed on the deck to allow continuous energy harvesting operations.

**Sensor Array**
Over 40 environmental and system-health sensors are continuously being relayed, providing full situational awareness to the remote operator.

**Communications**
The vessel uses 3G/4G, radio, Wi-Fi, and satellite for telemetry.

**Ruggedized Hull**
The hull and decks are made as light as possible without sacrificing strength by using an optimized blend of carbon fiber and S-Glass construction.

**Maximum Efficiency**
The hull and drive system have been designed for high efficiency. The hull is shaped to plane for high speed travel, but also travels easily in displacement mode for efficient long-distance travel.

**Hailing System**
A speaker and microphone allows two-way communication with nearby boats or people on the shore. This runs on the cell network.

**Self-Righting Design**
The vessel passively selfrights using our patent-pending design, allowing it to endure hurricane-force conditions.