The REMUS 100M mine countermeasures variant is a small class, two-man portable unmanned underwater vehicle (UUV) that can be rapidly deployed to hazardous areas to collect data in support of defense missions.

The open architecture and modularity of the REMUS Technology Platform facilitates increased capabilities, interoperability and applications while decreasing risk and cost.

Key Features
- Two-man portable, small-class UUV
- 100-meter depth rated
- Up to 10-hour mission duration
- Speeds up to 4.5 knots
- Open architecture
- Low logistics
- Rapidly deployable from any vessel of opportunity

Mine Countermeasures (MCM)
The REMUS 100 is used by expeditionary warfare forces worldwide to conduct shallow-water MCM and port and harbor clearance. Using side scan sonar, the REMUS 100 surveys large areas autonomously which allows operators to review the data away from the mine field to identify and classify mine-like objects.

Search and Recovery (SAR)
REMUS 100 UUVs are rapidly deployable from any vessel of opportunity and provide large area coverage on a single mission, making them ideal for SAR operations. Side scan sonar and precision navigation provide highly accurate data to locate targets, including downed aircraft and sunken ships.

Rapid Environmental Assessment (REA)
REMUS 100 UUVs can be used for REA, evaluating ocean bottom type and obstacles to clear Q routes and landing zones. Side scan sonar facilitates characterization of the physical environment to increase mission effectiveness, reduce risk and improve efficiency for follow-on missions.

Other Applications
Given the stability and versatility of the REMUS 100M, there are numerous applications possible. Other common applications include:
- Intelligence, Surveillance and Reconnaissance (ISR)
- Marine Geology
- Marine Archaeology

In 2003, the REMUS 100 was the first combat-deployed UUV in history during Operation Iraqi Freedom.
### Specifications

#### Standard Specifications, Sensors and Payloads

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depth Rating</strong></td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td><strong>Diameter</strong></td>
<td>19cm (7.5 in.)</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>1.85m (73 in.)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>38.6kg (85 lb.)</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>0–4.5 knots (0–2.3 m/s)</td>
</tr>
<tr>
<td><strong>Estimated Endurance</strong></td>
<td>10 hours</td>
</tr>
<tr>
<td><strong>Energy Storage</strong></td>
<td>1.5 kWh rechargeable lithium-ion battery</td>
</tr>
<tr>
<td><strong>Recharge Time in Vehicle</strong></td>
<td>6 hours</td>
</tr>
<tr>
<td><strong>Maximum Range</strong></td>
<td>67km (36nm)</td>
</tr>
</tbody>
</table>

#### Propulsion and Control
- Direct drive DC brushless motor, open 3-blade propeller; Cruciform fin control (yaw and pitch)

#### Communications
- WHOI micromodem 2.0 high frequency (20–30 kHz) acoustic communications; 2.4 GHz WiFi; Iridium (optional)

#### Antenna
- GPS, WiFi, Iridium, LED status lights, visible and infrared (IR) recovery locating strobe

#### Navigation
- iXblue Phins C3 Inertial Navigation System (INS); Garmin commercial GPS; Long Baseline (LBL); DVL-aided dead reckoning

#### Doppler Velocity Log (DVL)
- Teledyne 300 kHz phased array DVL with 200m bottom lock

#### Side Scan Sonar
- Marine Sonics (MSTL) MK II Arc Scout 900/1800 kHz dual frequency; Resolution up to 5cm; Swath up to 160m

#### Other Sensors
- YSI conductivity and temperature (CT) sensor; TE Connectivity depth sensor

#### Hard Drive
- 1 TB solid state hard drive

#### Warranty
- Standard 1 year warranty; Warranty options available

#### Software
- Vehicle Interface Program (VIP) for mission programming and post-mission analysis

#### External Connections
- 100 Megabit ethernet; Vehicle power/charging (110/220V)

#### Tracking
- Ranger & VIP software via towfish communications; Mission monitoring; Re-direct, loiter and abort commands

#### Safety Features
- Ground fault detection; Leak detection; Health status

#### Operations
- Capable of operating multiple REMUS vehicles simultaneously

#### Auxiliary Equipment
- Ranger and towfish; Ruggedized laptop; Hub box; Pelican transit case; Vehicle maintenance cradle; Operations and maintenance spares

#### Optional Payloads, Equipment and Software

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Camera</strong></td>
<td>Voyis 4K HD stills camera module with high intensity LED light-bar</td>
</tr>
<tr>
<td><strong>Iridium Communications</strong></td>
<td>Iridium capable with encrypted Iridium dial-up and SMS modem; Customer must provide SIM card</td>
</tr>
<tr>
<td><strong>Safety Features</strong></td>
<td>RJE International emergency locator beacon</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>SeeByte SeeTrack and Neptune; Reflection Post-Mission Analysis</td>
</tr>
<tr>
<td><strong>Auxiliary Equipment</strong></td>
<td>LBL transponders; Surface communications station</td>
</tr>
</tbody>
</table>

*At 3.0 knots (1.5 m/s) with standard sensors active

© 2022. Performance specifications are approximate and may vary depending on vehicle configuration, operational specifics, and environmental conditions. Specifications are subject to change without notice.