

REMUS 600M

Unmanned Underwater Vehicle

MINE COUNTERMEASURES VARIANT

The REMUS 600M mine countermeasures variant is a medium-class unmanned underwater vehicle that can dive to depths of 600 meters to collect high-resolution data in support of long-endurance defense missions.



Key Features

- Medium-class UUV
- 600-meter depth rated
- Up to 24-hour mission duration
- Speeds up to 4 knots
- Multiple launch and recovery options



Sailors from Mobile Diving and Salvage Unit (MDSU) two launch the MK18 underwater unmanned vehicle (UUV) during a training evolution at Joint Expeditionary Base Little Creek-Fort Story. (U.S. Navy photo by Mass Communication Specialist 2nd Class Benjamin Wooddy/Released)

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Mine Countermeasures (MCM)

The REMUS 600 is used by expeditionary warfare forces to conduct long-endurance MCM and port and harbor clearance down to 600 meters. Using high-resolution side scan sonar, the REMUS 600 surveys large areas autonomously, allowing operators to detect and classify mine-like objects during post-mission analysis.

Search and Recovery (SAR)

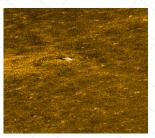
REMUS 600 UUVs allow for large area coverage on a single mission, making them ideal for SAR operations. Multiple launch and recovery options can be tailored to a wide variety of vessels. High-resolution side scan sonar and precision navigation provide highly accurate data to locate targets of interest, including downed aircraft and sunken ships.

Rapid Environmental Assessment (REA)

REMUS 600 UUVs can be used for REA, evaluating ocean bottom type and obstacles to clear Q routes. High-resolution 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 600M, there are numerous applications possible. Other common applications include:

- Intelligence, Surveillance and Reconnaissance (ISR)
- Seabed Warfare
- Marine Geology
- Marine Archaeology

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Specifications

	Sensors and Payloads
Depth Rating	600m (1968 ft.)
Diameter	32.4cm (12.75 in.)
Length	Approximately 3.6m (11.7 ft.)
Weight	Approximately 250kg (550 lb.)
Speed	0-4 knots (0-2.05 m/s)
Estimated Endurance*	Up to 24 hours
Energy Storage	Two 5.4 kWh lithium-ion battery trays
Maximum Range*	Up to 133km (72nm)
Propulsion and Control	Direct drive DC brushless motor; open 2-blade propeller; three independent control fins providing yaw, pitch and roll control
Communications	WHOI micromodem low frequency (8–16 kHz) acoustic communications; 2.4 GHz WiFi; Iridium (optional)
Antenna	GPS, WiFi, Iridium capable
Navigation	iXblue C7 Inertial Navigation System (INS); Garmin commercial GPS; Long Baseline (LBL); Doppler-assisted dead reckoning
Doppler Velocity Log (DVL)	Teledyne RDI 600kHz DVL
Side Scan Sonar	Klein UUV 3500 455/900 kHz dual frequency; Resolution up to 2.4cm; Swath up to 300m or Edgetech 2205 230/850 kHz dual frequency; Resolution up to 1.0cm; Swath up to 600m
Other Sensors	Conductivity and temperature (CT) sensor; Depth sensor
Warranty	Standard one year warranty; Warranty options available
Software	Vehicle Interface Program (VIP) for mission programming and post-mission analysis
Tracking	Ranger & VIP software via towfish communications; Mission monitoring; Re-direct, loiter and abort commands
Safety Features	Ground fault detection; Leak detection; Health status; Emergency strobe; Pencil beam sona
Operations	Capable of operating multiple REMUS vehicles simultaneously
Auxiliary Equipment	Power box with battery charger; ACOMMS bottle; Shipboard cables; Ranger and towfish; Ruggedized laptop; Vacuum pump; Pelican transit case; Vehicle maintenance cradle; Operations and maintenance spares
Communications Equipment Options	Shipboard console; Shipboard mast; Antenna box
Optional Payloads, Equip	ment and Software
Other Payloads	Camera and lightbar
Iridium Communications	Iridium capable with encrypted Iridium dial-up and SMS modem; Customer must provide SIN card
Navigation	Military GPS
Software	SeeByte SeeTrack and Neptune; REmote CONtrol (RECON); Reflection Post-Mission Analysis
Auxiliary Equipment	Surface communications station; Gateway buoy

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

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