REMUS 620

Unmanned Underwater Vehicle

Long Range, Multi-Day Autonomy for Complex Undersea Missions

The REMUS 620 is HII's next generation medium-class UUV. Engineered to deliver exceptional endurance, mission capacity and collaborative autonomy through the cross-domain Odyssey™ asset management suite, it's modular, open-architecture design and field-proven reliability offers unmatched flexibility above or below the surface.

The REMUS 620's battery life operates up to 110 hours and 275-nautical-mile range, making it the longest-reaching UUV in its class. Able to operate collaboratively with multiple vehicles, the REMUS 620 can be deployed from a wide range of surface and underwater vehicles and aircraft, or can serve as a host platform to launch and operate other vehicles or payloads.

System mission planning, monitoring and analysis are powered by Odyssey™ Mission—part of the HII's Odyssey Advanced Autonomy Solutions® suite.

Mission Applications

- **Mine Countermeasures (MCM)**
- **Hydrographic Survey**
- **Intelligence Collection**
- **Surveillance**
- **Electronic Warfare**

The first recovery of a second-generation REMUS 620 into a Virginia-class submarine torpedo tube marks a major milestone in enabling the U.S. Navy Submarine Force autonomous undersea vehicle launch and recovery effort.

Advantages

- Dry or wet primary payload modules
- Externally accessible universal bulkhead adapters for secondary payloads
- Mature product line for seamless module integration
- High-accuracy navigation for precise mission execution
- Replaceable battery modules for extended endurance and operational flexibility
- Cyber capable architecture for secure mission operations

Features

- Medium-class UUV
- 600-meter depth rating
- Up to 110-hour mission duration
- Speeds up to 8 knots
- Flexible energy options with blind-mated end caps for rapid field battery exchange
- Removable 8-16 TB hard drive

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Contact:

24-Hour Technical Support: +1 508-685-9127 uxs.techsupport@hii.com

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Specifications

REMUS 620 Base Configuration			
Lithium-ion Battery Options	**(1X Battery) 9.6 kWh**	**(2X Battery) 19.3 kWh**	**(3X Battery) 28.9 kWh**
Recharge Time In Vehicle(1)	12 hours	12 hours	12 hours
Length & Weight (2)	2.7m (105 in.) / 188kg (414 lb.)	3.5m (137 in.) / 256kg (565 lb.)	4.3m (169 in.) / 326kg (719 lb.)
Endurance & Max Range	42 hours / 204 km (110nm)	80 hours / 370 km (200nm)	110 hours / 509 km (275nm)
Example Payload Configuration with Kraken Aquapix MINSAS 120 (Wet Payload) (3)			
Length & Weight (2)	4.4m (174 in.) / 293kg (647 lb.)	5.2m (206 in.) / 362kg (797 lb.)	N/A
Endurance & Max Range	26 hours / 130km (70nm)	50 hours / 245km (132nm)	N/A
Standard Specifications, Sensors and Payloads			
Depth Rating & Hull Diameter	600m (1969 ft.) / 32.4cm (12.75 in.)		
Energy	Li-Ion Battery Module with 9.6 kWh of energy. Includes battery fault detection and built in emergency features. All energy modules are identical and swappable		
Propulsion and Control	Direct drive DC brushless motor, 2-blade propeller (shroud optional); three independent control fins providing yaw, pitch and roll control. Controllable speed of 2-8 knots dependent upon environment and vehicle configuration		
Acoustic Communications	WHOI micromodem 2.0 low frequency acoustic communications (10 kHz center frequency). Contact HII for high frequency options (25 kHz center frequency)		
RF/Visual Communications	Single antenna includes encrypted Iridium with dial-up & SMS modem (Customer provides SIM card), WiFi, LED status lights and visible with infrared (IR) recovery locating strobe		
Navigation	iXblue Phins C7 Inertial Navigation System (INS) with accuracy to 0.05% distance travelled (DT) (CEP50) or 0.12%DT (2DRMS); Teledyne RDI 300 kHz phased array DVL with extended range tracking (up to 350m bottom lock(4)), L1/L2 commercial GPS; Long Baseline (LBL); DVL aided dead reckoning		
Environmental Sensors	Conductivity & Temperature (CT) sensor, depth sensor		
Hard Drive & Payload Processor	8-16 TB Solid state hard drive with sufficient capacity to accommodate full duration sorties. Externally removable option available; NVIDIA® Jetson AGX Xavier™ Payload Processor		
Shore Power & Data Connections	Gigabit ethernet; Vehicle power/charging/discharging		
Primary Payload Connections	Comes standard with two (2) payload power and gigabit ethernet connections. Multiple power options available. Contact HII for additional details.		
Secondary Payload Connections	2 x pressure hull interfaces in Communications Module for custom payload options. Each with power, RS-232 Serial, and Digital I/O connections within the hull section		
Nose	Comes standard with line release latch, pop float, and adjustable external ballast		
Warranty	Standard 1 year warranty; Warranty options available		
Command & Control / Software	REMUS Vehicle Software with VIP and/or Odyssey Mission Manager (GUI) for mission programming & post-mission analysis. Capable of multi-vehicle operations		
Safety Features	Ground fault detection; Leak detection; Health Status; Built-In-Test (BIT); Built-in Emergency Features, Deluge Capable		
Operations Kit	Includes: Vehicle Charging & Conditioning Station, Low Frequency Tow Fish, Surface Communications Station, Vehicle Cart, Laptop, Data Cable, Vacuum Pump, Ethernet Switch, and recommended spares parts for 2 weeks of shipboard operations		
Other Available Features and Options			
Cyber Capable	Size, Weight, and Power allocated for Data-At-Rest and Data-In-Transit Encryption Hardware		
HDK and SDK	Hardware and software interface information available upon request		
Additional Software Applications	SeeByte SeeTrack and Neptune; REmote CONtrol (RECON)		
Optional Environmental Sensors	Up to two AML Oceanographic environmental sensors available as options: Turbidity, Dissolved Oxygen, pH, Chlorophyll, A&B Blue Excitation, CDOM/FDOM, Fluorescein, Rhodamine, Crude Oils, Refined Fuels, Tryptophan, Optical Brighteners, Phycoerythrin (BGA)		
Maintenance & Operations Kits	Basic and Advanced Maintenance Kits Available; Additional Spares & Operations Equipment Available		

(1) Charge times may vary with temperature. Batteries are capable of off-vehicle charging, contact HII for details.
(2) Length & Weight are approximate
(3) Kraken Aquapix Interferometric Synthetic Aperture Sonar with bathymetry, real-time resolution of 3.0cm x 3.3cm; Swath up to 400m with MINSAS-120; Improved SAS resolution down to 1.9cm x 2.1cm is available with Kraken's Ultra High Definition post processing option.
(4) Represents maximum typical values observed. Results will vary based on environment and ocean floor conditions.

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About HII

HII is a global, all-domain defense provider. HII's mission is to deliver the world's most powerful ships and all-domain solutions in service of the nation, creating the advantage for our customers to protect peace and freedom around the world. As the nation's largest military shipbuilder, and with a more than 135-year history of advancing U.S. national security, HII delivers critical capabilities extending from ships to unmanned systems, cyber, ISR, AI/ML and synthetic training. Headquartered in Virginia, HII's workforce is 44,000 strong. For more information, visit: HII.com.