



# REMUS 620

Unmanned Underwater Vehicle

UNSURPASSED MULTI-MISSION CAPABILITIES

**HII's second generation medium-class UUV is now available for delivery, with enhanced endurance, mission capacity and Odyssey™ advanced autonomy. But that's just the beginning.**



## How we offer unmatched capability

Designed for greater efficiency and modularity, coupled with field-proven reliability, the REMUS 620 is the longest-reaching UUV in its class. With a battery life of up to 110 hours and a range of 275 nautical miles, it delivers unmatched multi-day endurance, range and stealth.

Its modular, open architecture design and seamless payload integration, allow you to easily shift between any mission, above or below the surface, including mine countermeasures, hydrographic surveys, intelligence collection, surveillance and electronic warfare.

## The ultimate in versatility

Multiple REMUS 620s operating collaboratively, can be deployed from submarines, small manned or unmanned boats, amphibious ships, surface combatants, and helicopters.

REMUS 620 can also be used as a platform to launch and operate other unmanned vehicles or payloads from beneath the sea—*whatever your mission requires*. Plan, monitor and analyze any of these missions with the new Odyssey™ Mission Management Software, part of the HII Odyssey™ suite of advanced autonomy solutions.

**30 years of innovation and delivery of more than 600 UUVs to 30 countries worldwide.**

## Key Features

- Dry or wet customizable primary payload modules
- Externally accessible universal bulkhead adapters for secondary payloads
- Open standard interfaces between modules
- High accuracy navigation
- Replaceable battery modules for endurance and flexibility
- Cyber ready



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### ABOUT US:

World leading autonomy and multi-domain autonomous systems making vast expanses of the earth accessible for defense, research and commerce.

### LEARN MORE:

USA: +1 508-563-6565  
Europe: +44 2392 417 222  
uxs.sales@hii-tds.com

Vehicle Specifications: Three Rechargeable Battery Options			
Lithium-ion Battery Options	(1X Battery) 9.6 kWh	(2X Battery) 19.3 kWh	(3X Battery) 28.9 kWh
Recharge Time In Vehicle	12 hours	12 hours	12 hours
Recharge Time Off Vehicle	8 hours	10 hours	12 hours
No Payload			
Length & Weight*	3.1m (123 in.) / 210kg (464 lb.)	3.9m (155 in.) / 279kg (615 lb.)	4.8m (187 in.) / 347kg (766 lb.)
Endurance & Max Range**	42 hours / 204 km (110nm)	80 hours / 370 km (200nm)	110 hours / 509 km (275nm)
Kraken Aquapix MINSAS 60 (Dry Payload)***			
Length & Weight*	4.0 (156 in.) / 275kg (607 lb.)	4.8m (188 in.) / 334kg (757 lb.)	5.6m (220 in.) / 411kg (907 lb.)
Endurance & Max Range**	30 hours / 145km (78nm)	55 hours / 270km (146nm)	78 hours / 380km (205nm)
Kraken Aquapix MINSAS 120 (Wet Payload)***			
Length & Weight*	4.4m (174 in.) / 290kg (638 lb.)	5.2m (206 in.) / 357kg (787 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	UN Certified 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 (with or without shroud); 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 (8-16 kHz) acoustic communications		
RF/Visual Communications	Single antenna includes encrypted Iridium with dial-up & SMS modem (Customer provides SIM card), WiFi, LED status lights and visible & 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 (<475m bottom lock), L1/L2 commercial GPS; Long Baseline (LBL); DVL-aided dead reckoning		
Environmental Sensors	Conductivity & Temperature (CT) sensor, depth sensor		
Hard Drive & Payload Processor	4-16 TB Solid state hard drives 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	2 x 280 watt capable and ethernet connections****		
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 Odyssey Mission Manager (GUI) for mission programming & post-mission analysis. Capable of multi-vehicle operations.		
Safety Features	Ground fault detection; Leak detection; emergency locator beacon; 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 & Software Development Kits available for integration of third-party payloads & autonomy		
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		

\*Length & Weight are approximate

\*\*Estimated range & endurance calculated assuming ideal environmental conditions w/ no payloads & transit speeds between 2.5-3 knots. Actual results may vary.

\*\*\*Kraken Aquapix Interferometric Synthetic Aperture Sonar with bathymetry, constant resolution of 3cm x 3cm processed post-sortie (optionally real-time); Swath up to 236m with MINSAS-60 & up to 440m with MINSAS-120; Improved SAS resolution down to 2 cm x 2 cm is available with Kraken's Ultra High Definition post processing option (on-board real-time processing is limited to 3x3 cm resolution)

\*\*\*\* Additional connections and power may be available, contact HII for further details