

General Vehicle Performance Specifications for the UPRM AUV

Vehicle Specifications

Vehicle Characteristics	Specification
Maximum Depth	700m with 1.5 safety factor
Vehicle power	2kWhr Li Ion Rechargeable Batteries
Endurance	Minimum of 8 hours at cruising speed of 1.0 knots with all onboard sensor, communications, and navigation equipment on line.
Data Storage	2 x120 Gigabytes hard drives, where the expected load for all sensors for a 8hr mission is <80 Gigabytes
Additional Payload Space	Plenty of additional space, buoyancy, computational power, disk space will exist for the integration of other sensors
Maximum Operating Current	2 knots from any direction relative to the intended track
Operational Salinity Range	0-37 ppt
Operational Temperature Range	-2°C to + 45°C
Transportation Temperature Range	-32°C to +63°C
Navigation Equipment Sensors	An RDI 1200 kHz DVL will be used for autonomous navigation.
Navigation Pressure Transducer	700m rated Paroscientific Depth Sensor will be integrated into the vehicle navigation stream
Additional Acoustic Navigation	A transponder for Tracklink ultra short baseline (USBL) will be included although no provisions are made for surface deck units and transducers as part of this quote
Surface Communication	RF radio modem with minimum range of 2 km
CTD Sensors	A Seabird model CTD Fastcat
Acoustic management	Acoustic non-interference will achieved by complete isolation of electrical and physical mounting systems.
Camera	4 Megapixel, 12 bit dynamic range Gigabit Ethernet camera with associated strobe
Multibeam	Imagenex Delta-T multibeam system
Time Synchronization	All sensors, navigation equipment and data collection devices shall be time synchronized to within 8ms.