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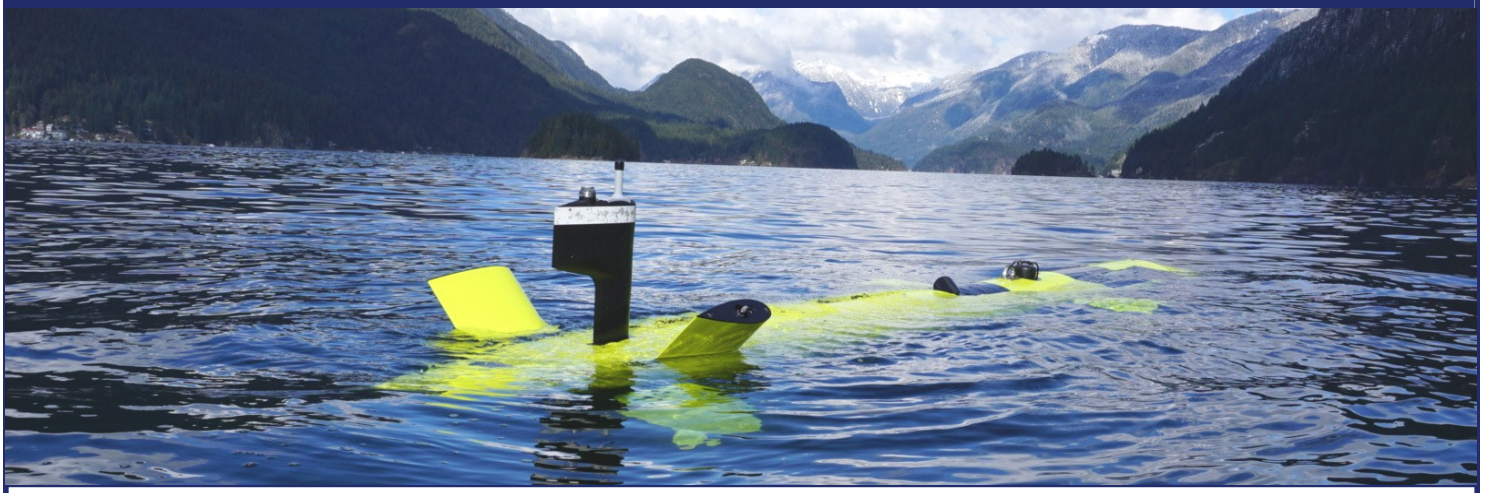
ISE EXPLORER Class AUV



The Explorer class of AUV is a modular vehicle comprising of a forward free-flooding section, full diameter pressure hull and a free flooding aft section. It is optimized for longevity and can be adapted to meet new requirements. It is available in many configurations and depth ratings from 300 m to 6000 m.

Vehicle systems and payload sensors can be customized at any time. Payload equipment can be fitted in either of the free-flooding sections, with the associated electronics installed inside the pressure hull on a standard 19 inch rack. The wet payload can accommodated sidescan sonar, multibeam echosounder and sub-bottom profiler. Payload data is easily accessible through a high speed Ethernet connection.

The Explorer AUV is renowned for its low operating costs, flexibility and exceptional long range unsupervised capability. In the spring of 2010, an Explorer completed more than 10 days of continuous operations under ice, covering more than 1000 km of unsupervised survey without being recovered. Charging and data transfer all took place underwater. The Explorer is also a very stable sensor platform, with a maximum deviation of 0.2º per second in roll, pitch and yaw.

Vehicle Specifications

Length	4.5 - 7.25 m
Depth Ratings	300, 1000, 3000, 5000, 6000 m
Hull Diameter	0.69 m (300/3000 m), 0.74 m (5000/6000 m)
Endurance	24 - 85 hrs
Effective Range	120 - 450 km
Speed Range	0.5 - 2.5 m/s
Dry Weight	640 - 1850 kg
Power Source	18, 32, or 48 kWh Lithium Ion Battery Modules
Control Computer	Rack Mounted Compact PCI System
Hydroplanes	3 or 4 Aft Planes, 2 Fore Planes
Navigation	Fiber Ring Gyro
Velocity Sensor	DVL
Positioning	GPS and USBL
Depth Sensor	Quartz Crystal Resonator
Altitude Sensor	DVL and Multibeam Echosounder
Acoustic Coms	Subsea Coms
Radio Telemetry	900 OR 2400 MHz radio, Iridium Satellite Communications
Emergency Equip.	Emergency Transponder, Strobe Light, RF Beacon, Drop Weight
Typical Payload	CTD, Sidescan Sonar, Sub-Bottom Profiler, Multibeam Echosounder
Optional Payload	ADCP, Hydrocarbon Detector, Variable Ballast, Laser Scanner, Long Range Homing, H_2O Sampler, Fluorometer, Dissolved O2, pH Sensor