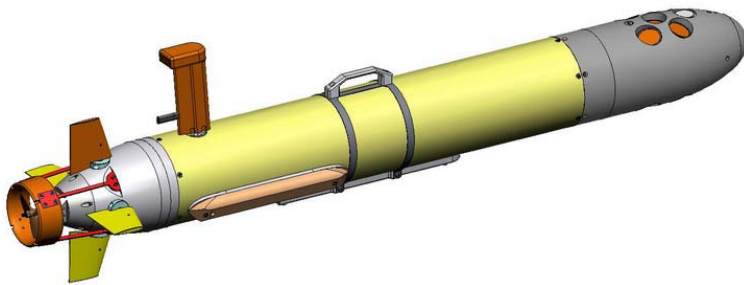




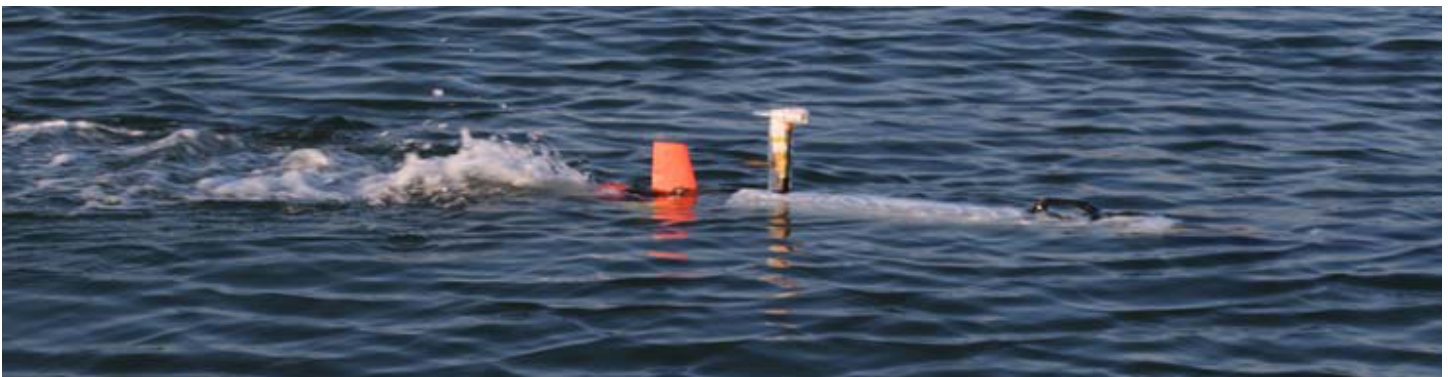
## Iver2 Autonomous Underwater Vehicle



### Affordable Next Generation AUV Open System Architecture

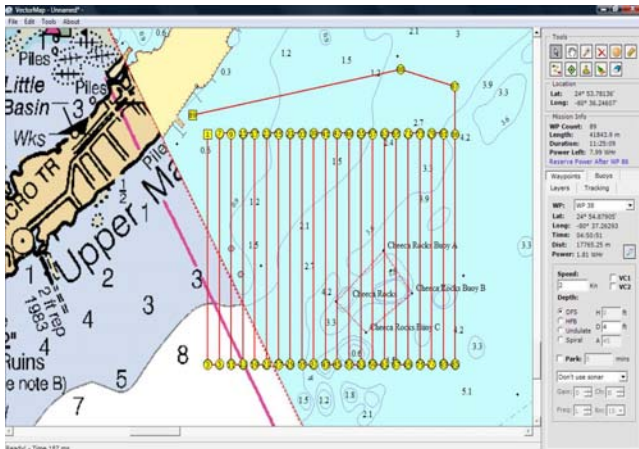
- *First Commercially Available Vehicle Under \$50,000*
- *Single Person Launch from Shore (only 44 lbs)*
- *Workhorse Vehicle with 14+ Hours of Operation*
- *Simple to Operate Windows XPe Based Platform*
- *Point and Click Mission Planning in Only Minutes*
- *Well Suited for a Variety of Payloads & Sensors*

Roper Resources Ltd.  
Cdn Sales: (250) 361-9115  
US Sales: (805) 798-0277  
Chris@RoperResources.com  
www.RoperResources.com



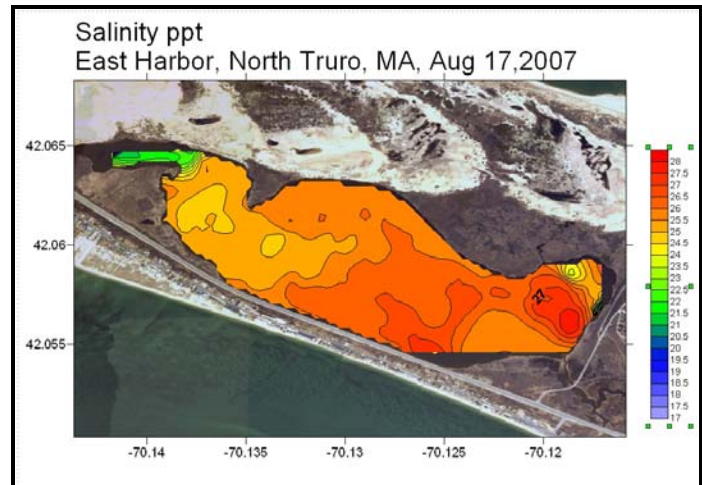
## Simply the Best Marine Platform

Iver2 is an affordable, next generation AUV designed to execute a variety of missions in near coastal environments. Iver2's smart design delivers a robust open system architecture which utilizes the very latest manufacturing processes and marine technology. Application providers or researchers can use the functionality of the standard base vehicle or add any number of sensors. The time stamped, geo-referenced mission data can be downloaded into familiar post-processing programs while the vehicle is on the surface, or after the project is complete.



### VectorMap Mission Planning Software

- Plan a mission, transfer it to the Iver2 and start the mission in less than one minute. The Iver2 stores the information until the mission is initiated.
- VectorMap output is an ASCII mission file that is transferred to the Iver2 AUV using a Wi-Fi connection.
- Uses standard geo-referenced charts from NOAA, USGS, or satellite images.
- Develop missions by simply 'clicking and dragging' waypoints.
- Plan multiple vehicle missions (or a multi-vehicle mission) on the same map.
- Operator sets parameters for each leg to a waypoint – speed, depth, special behavior such as undulating or spiral dive for data collection.



### Example Environmental Mission Data

Planning a mission has never been easier. Download readily available geo-referenced charts, maps or satellite images into Iver2's mission planning software and just click to position waypoints where you want the vehicle to go. This simple but powerful tool lets you program the vehicle and sensor parameters for each leg, or for a complete survey. A rugged battery operated Wi-Fi box enables transfer of mission files.



## *Iver2 AUV Applications:*

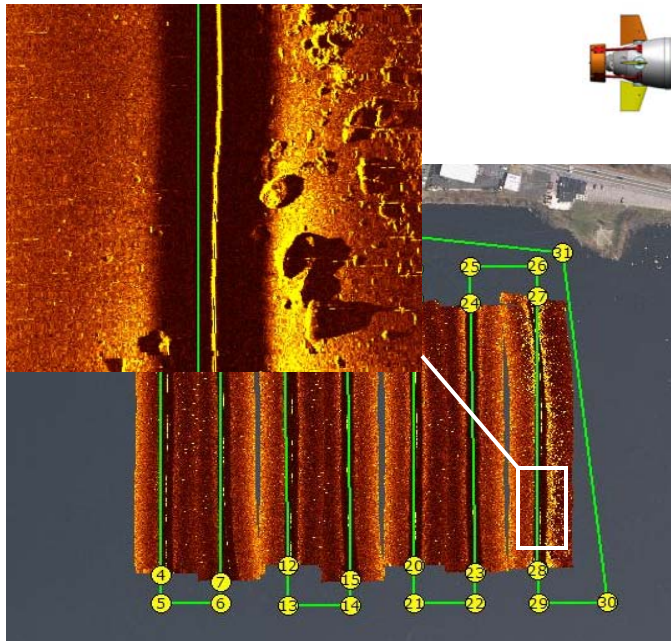
*Rivers, Lakes, Coastal (1 < 100 Meter Depth)*

**ENVIRONMENTAL** ~ Water Quality Monitoring, Bathymetry, Fisheries

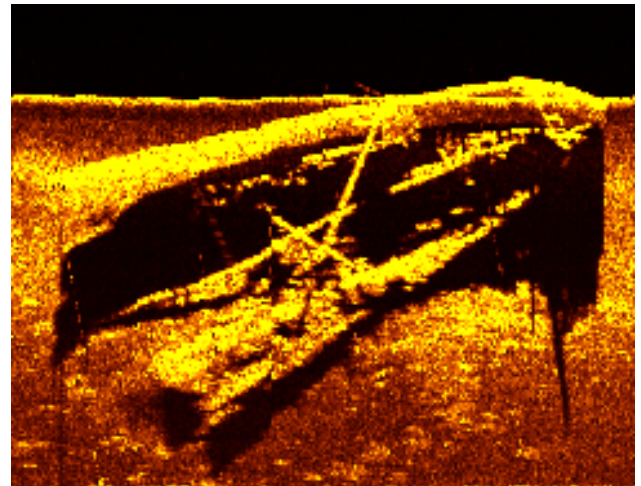
**SURVEYING** ~ Hydrographic Surveying, Obstacle Detection, Coastal Construction

**PORT & HARBOR SECURITY** ~ Inspection of Vessels, Piers, Bulkheads and Port Infrastructure (Sonar or Visual)

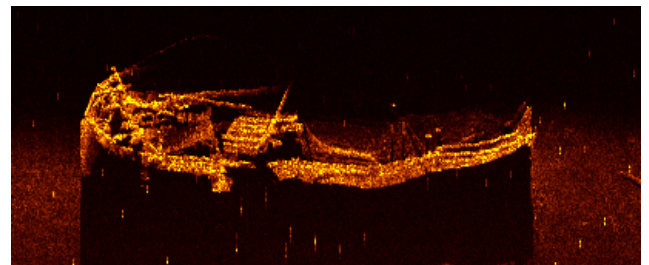
**RESEARCH** ~ AUV Platform to Support Sensor Development, Acoustics, AUV Behavior



**Iver2 AUV Side Scan Mission**



**Actual Sonar Data**



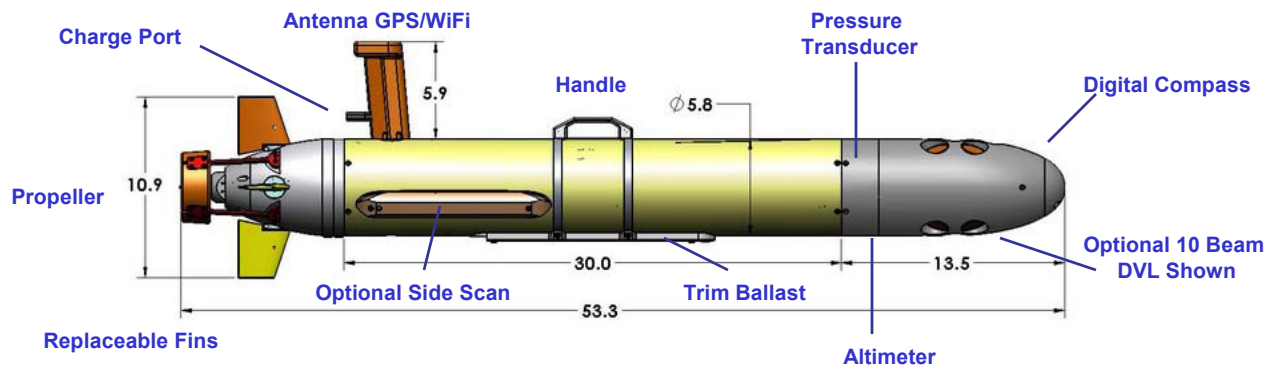
## Specifications

### SPECIFICATIONS

**Dimensions:** Length: 49.8 inches; Diameter: 5.8 inches (without sensors)  
**Energy:** 600 WHrs of rechargeable Lithium-Ion batteries (>300 cycles)  
**Endurance:** 14 plus hours at 2.5 knots; battery configuration dependent  
**Speed Range:** 1 - 4 knots  
**Control:** Four independent control fins  
**Weight:** Base Vehicle 44 Lbs  
**Navigation:** Dead reckoning underwater; Differential GPS when on the surface  
**Tracking:** Internal data log – programmable resolution  
**Sensors:** Depth, distance off bottom, three axis digital compass  
**Onboard Electronics:** Low power X86 processor, large 80 GB disk drive for data collection  
**Software:** Windows XP Embedded, GUI-based Navigation Suite (Vector Map)  
**Communication:** 2.4 GHz radio link when on the surface (Wireless 802.11g Ethernet)

### OPTIONS

**Safety Float :** Emergency Airbag Recovery System (includes acoustic pinger)  
**Side Scan Sonar:** 330 / 800 kHz, One Transducer per Side (OceanServer Mosaic Software)  
**Additional CPU Card:** AMD LX800, 500Mhz, 2xUSB, 2xRS232, 1xEthernet, PC104 format, ultra low power for remote helm command or sensor interface  
**Camera Bundle:** Digital Video Recorder System Integrated into VectorMap Software for post Mission Processing (support up to 2 cameras both videos and stills) \*Available Q4/09  
**Rugged Transit Case:** Case with custom foam inserts for Iver2 includes collapsible stand  
**Communications:** 900 MHz or Cellular  
**Doppler Velocity Log (DVL) Options:** 4 Beam, 5 Beam or 10 Beam (optional water profiling)



Notes: vehicle dimensions in inches, standard vehicle with no DVL is 49.8"

### CONTACT US

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