

## Spec Sheet

**Viking Explorers, Inc.**  
**Long Beach City College**  
**Long Beach, CA**

- Company founded in 2004 and National Winner in 2009.
- 15th year competing.
- Co-enrolled pre-college through sophomore level.
- Estimated Distance Traveled: 2283 Miles

### ROV Details

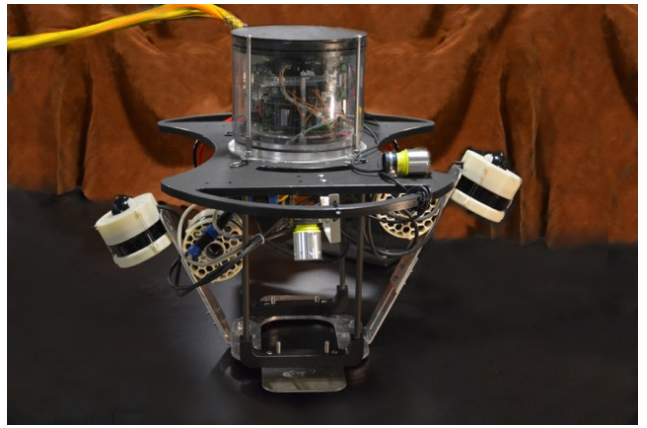
- Name: Hoegr
- Compact size of 23.5cm x 23.5cm x 23.5cm
- Total Weight of 160N for ROV & Task Package & Tether
- Total Cost: \$7,810.43
- Total Person Hours: 5208 and counting!

### Safety Features:

- Fully Wired to NEC and MATE Standards
- Utilizes non-toxic Bismuth/Tin (88/12) Alloy instead of lead for ballast needs
- Rounded edges
- Sheathed tether protects ROV power and RS-485 lines
- Honeycomb, flow-enhancing thruster guards meeting IP22 Standards for finger protection
- 30A Master fuse
- Emergency shutdown relay to instantly cut all power, large **RED** switch to open relay
- Pressure release valves

### Special Features

- Easy Access Stacked Circuit Board System for ROV Control
- Each Circuit Board with own 48V to 12V converter distributing power conversion throughout the system
- Autonomous Computer Vision
- Deep Learning Trained Algorithm
- Pneumatic Lift Kit and simple pneumatic actuators.
- Modular Design with quick change packages
- MicroROV Deployed from ROV with simple retractable tether management system
- Switchable multi-view cameras
- Built almost entirely out of material with a specific gravity of 0.98 g/cc<sup>3</sup> resulting in lower buoyancy requirements and a smaller ROV.



Alan Hill	CEO	Michael Lyon	Hardware Design
America Castaneda	Mechanical Engineer	Omar Quezada	Mechanical Engineer
Angela Montes	Mechanical Engineer	Oscar Basurto	Surface Controls
Brandon Ormeno	Software Design	Peter Donovan	Image Recognition Software
David Prieto Pineda	Mechanical Design	Raul Felix	Electrical Engineer
Gerardo A Barrera	Lead Software Dev.	Timothy Recker	Micro ROV Designer/SW Design
Johnathan Hernandez	Software Design	Triton Seibert	Micro ROV Designer/SW Design
Krista Zaloudek	Archivist/CFO	Vaclav Sareja	Image Recognition Software
Matthew Hall	Surface Controls	<b>All members are NEW and have not participated in MATE</b>	

Mentor: Scott Fraser