

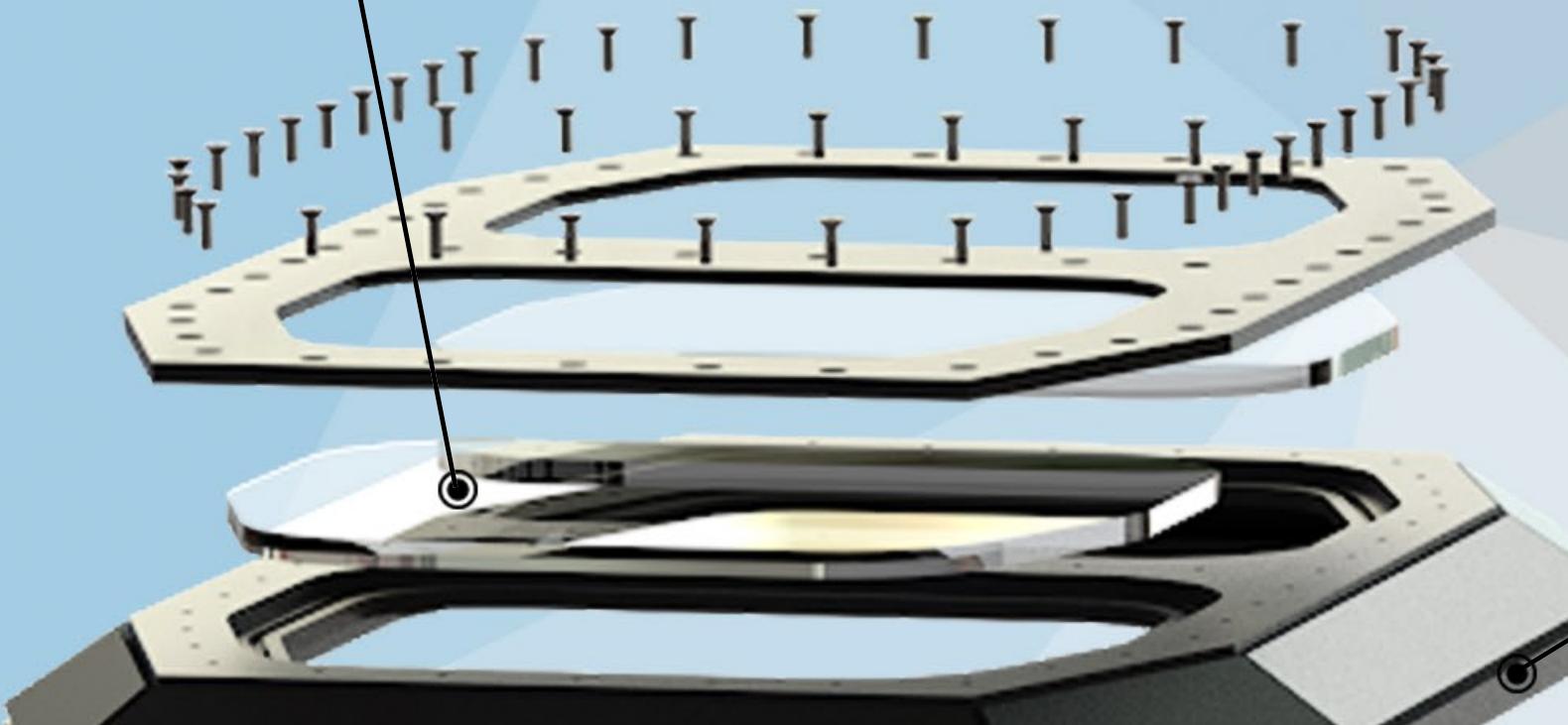
Autonomous Underwater Vehicle Test Bed

An SDSU Mechatronics Sponsored Project

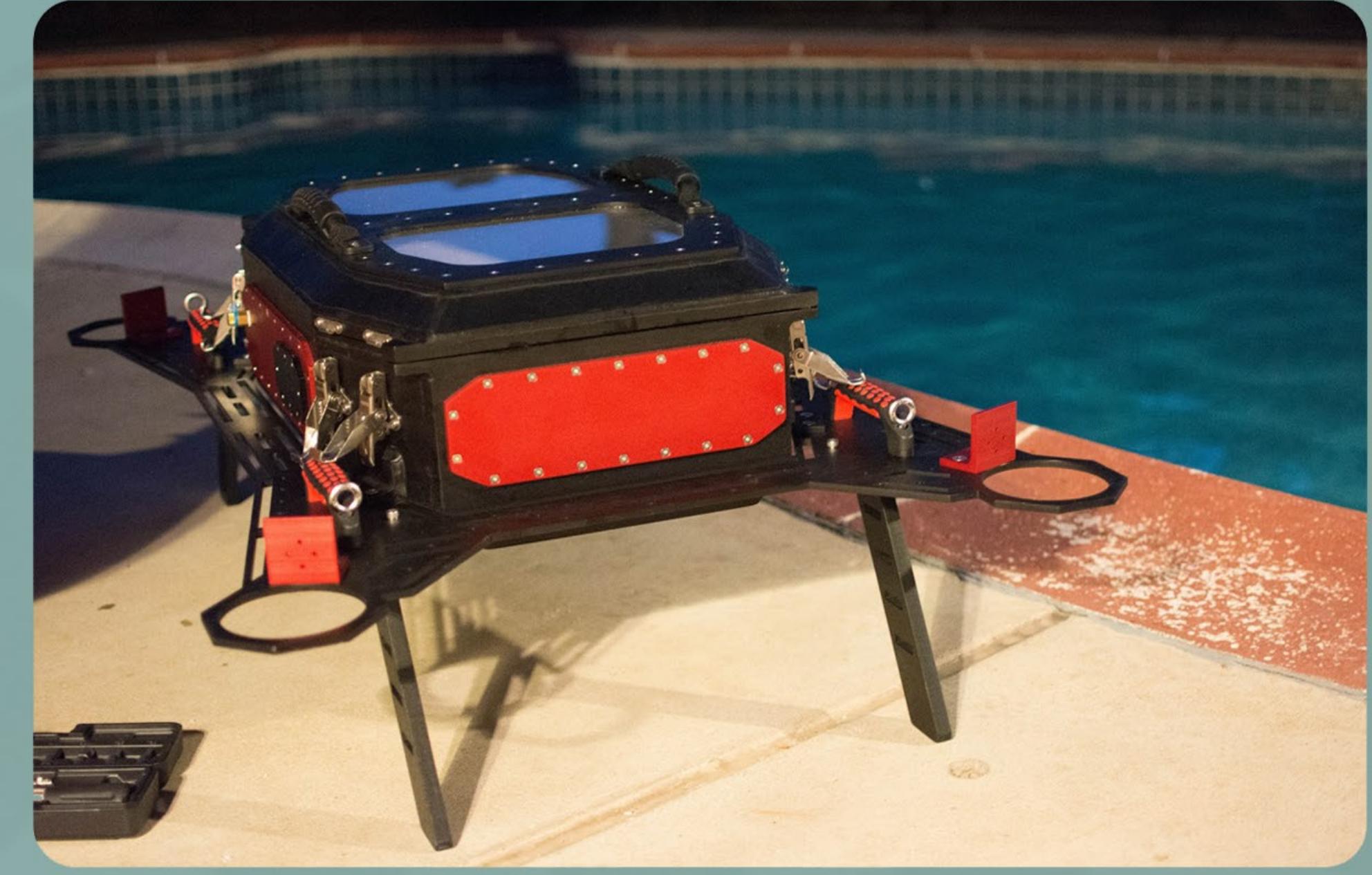
Design Requirements

- Budget: \$7000 USD
- Weight: < 150 Lbs (Full Load)
- Size: < 44" Wx70" Lx30" H
- Toughness: Salt/Chlorinated Water and UV Resistance
- Depth Rating: 40ft
- Payloads: Electronic, Subsystems, Sensors, Actuators, Batteries
- Application: Safe and Easy Interface with Aquatic Environments

Dual Upper Viewing Windows



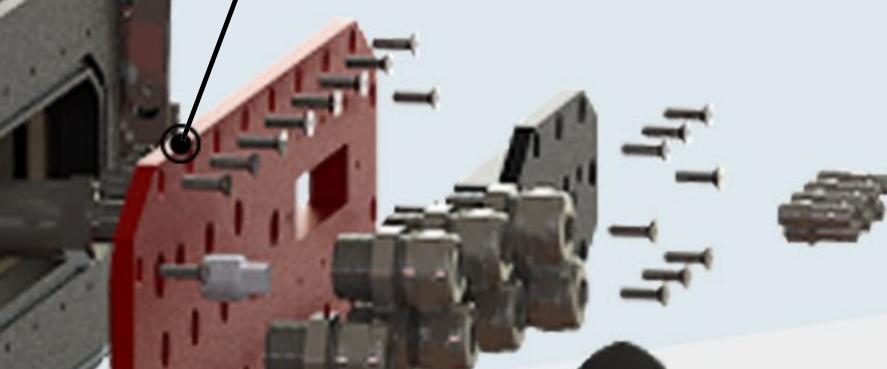
Clamshell Lid



Adaptable Internal Frame



Modular I/O Panels



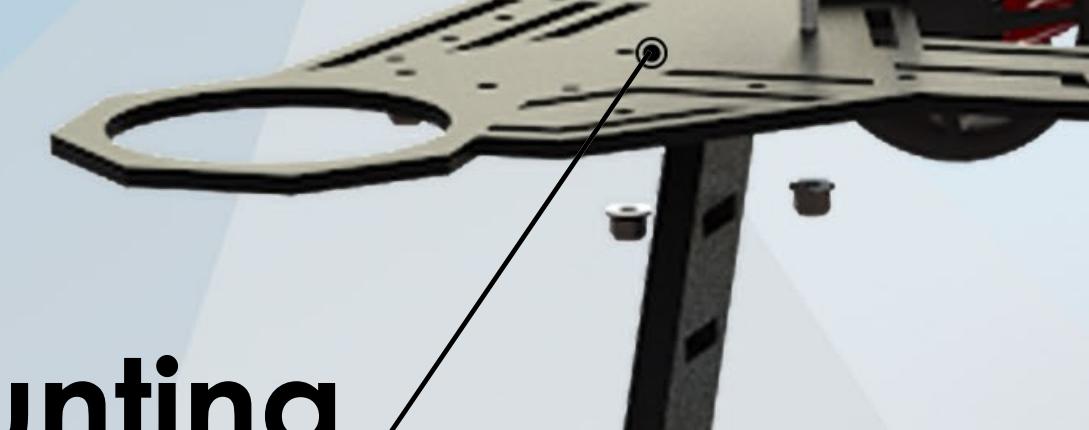
Blue Robotics T200 Thrusters (8X)



Front Facing Camera Window

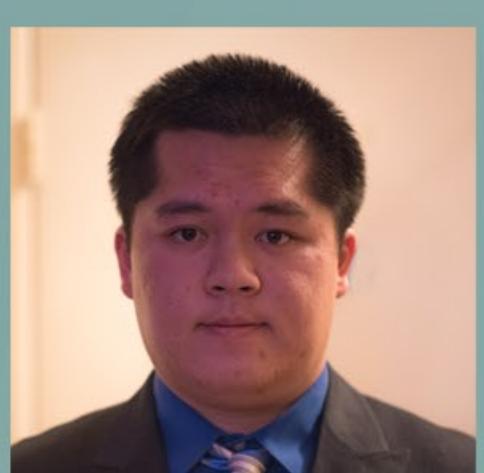


External Frame for External Component Mounting



Belly Frame

Red and Black Anodized 6061-T6 AL



Hy
Cao



Andrew
Lepetri



KC Jack
Nave



Colin
Banks



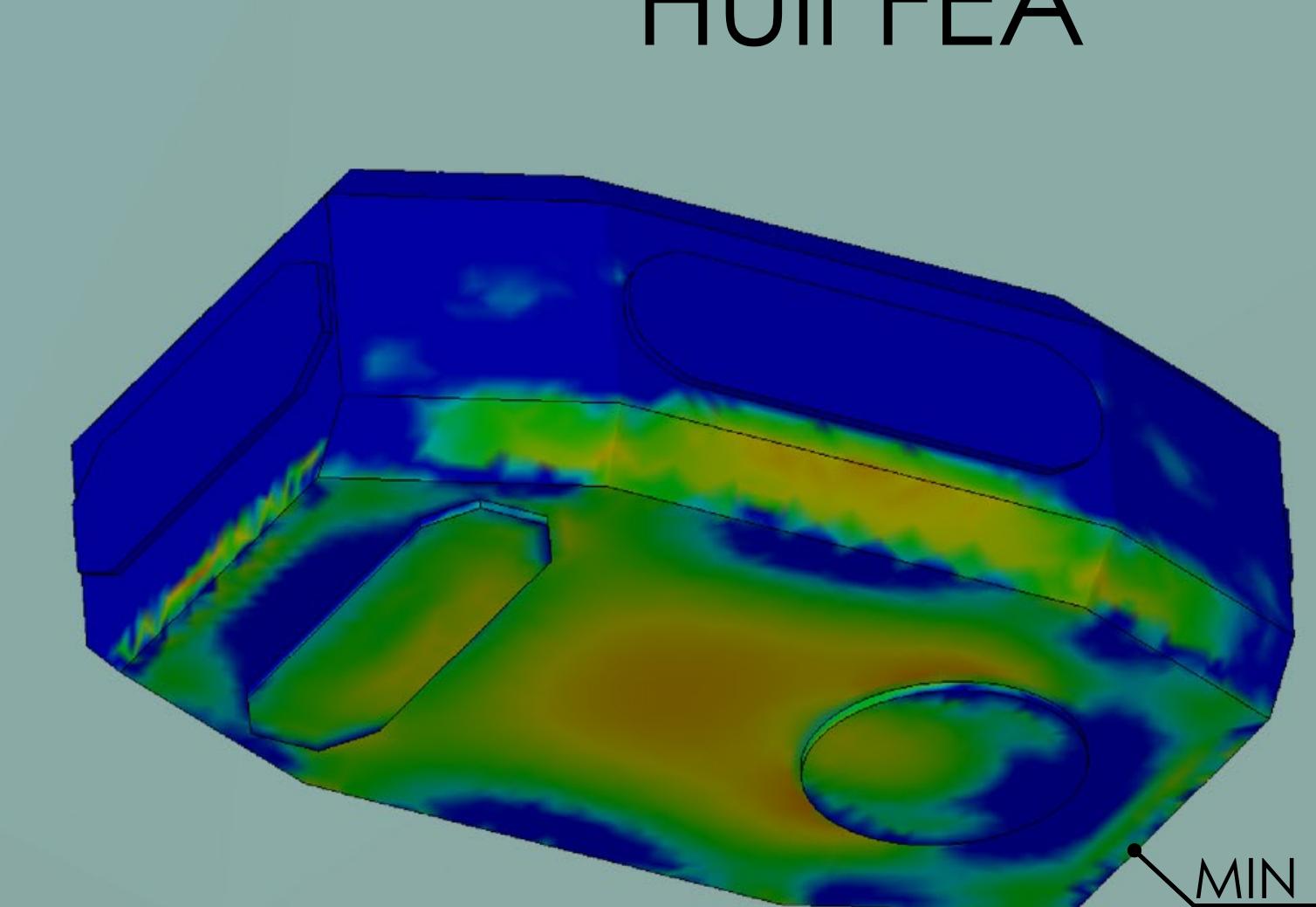
Sawyer
Villa

Thanks to SDSU's Mechatronics Club for providing funding and guidance, Metal Master's Inc. for their collaboration and manufacturing, and to San Diego State University for access to their resources and facilities.

Project Mission

The Autonomous Underwater Vehicle (AUV) testbed is designed to alleviate the current restriction that a two year design cycle imposes on San Diego State University (SDSU) Mechatronics organization which has limited the full and continued involvement of the team throughout the year. This AUV testbed fills this need by providing a secure and versatile way to place mechanical and sensory components into their operational environments, serving as the primary means of testing in preparation for competitions.

Hull FEA



External Frame FEA

