TEAM VARUNA

ROV

SRI SAIRAM COLLEGE OF ENGINEERING

Technical SpecificationsPhysical

Length	500 mm
Width	400 mm
Height	300 mm
Weight in Air	12-13 kg
Net Buoyancy	0.3 kg
Watertight Enclosure Inner Diameter	100 mm
Watertight Enclosure Inner Length	280 mm
Mainframe	Aluminum 6061 T6
Side Frame	High Density Poly-Ethylene
Electronic enclosure	4'' Acrylic Tube 5mm thick with Aluminum End caps
Battery Enclosure	4'' Acrylic Tube 5mm thick with Aluminum End caps

Battery

Lithium-ion Battery (14.8V, 18Ah)

Battery Life :2-3 hours w/ 18Ah battery

Battery Life :4-6 hours w/ 18Ah battery

Performance

Maximum Rated Depth	100 m
Maximum Tested Depth (so far)	50m
Maximum Forward Speed	1 m/s
Thrusters	Blue Robotics T200

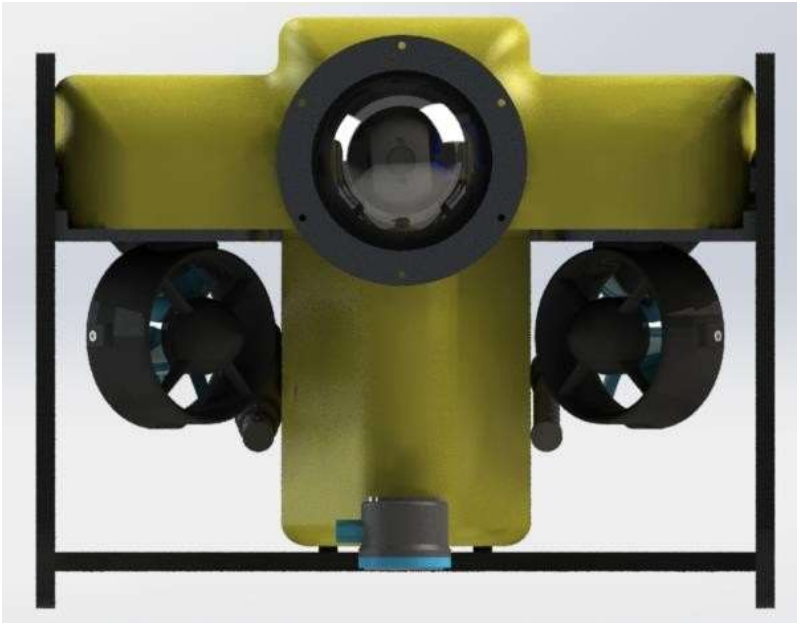
ESC	Blue Robotics Basic 30A ESC
Thruster Configuration	6 thrusters 4 vectored , 2 Vertial
Forward Bollard Thrust	14 kgf
Vertical Bollard Thrust	9 kgf
Lateral Bollard Thrust	14 kgf

Electronics

- Raspberry pi Model 3B
- Pixhawk 2.4.8
- Arduino Mega 2560
- Raspberry- Pi Camera/Low Light HD camera
- Ping sonar
- Google Coral Development Board

CAD MODELLING & FABRICATION

CAD MODELING

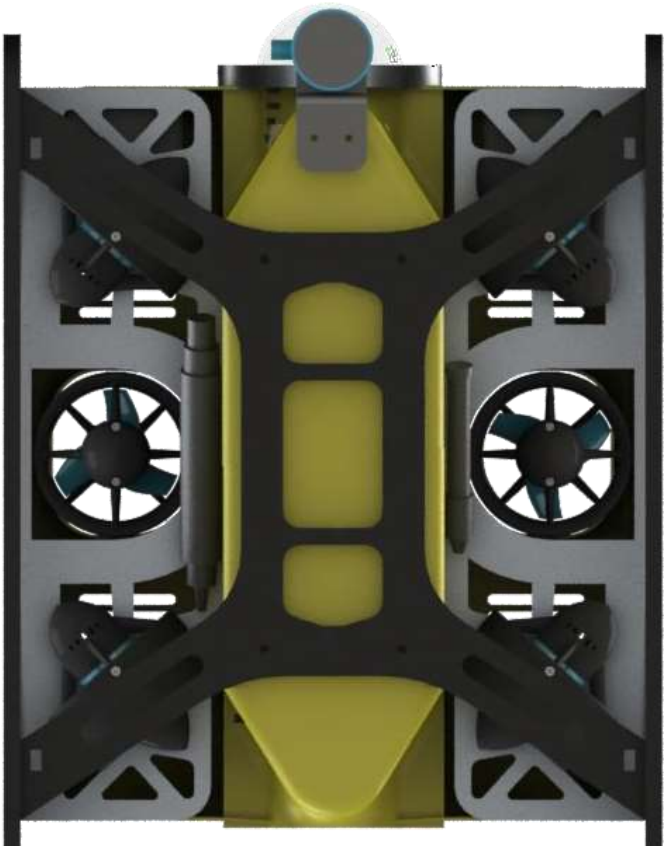


Front View of AUV

Isometric View of AUV

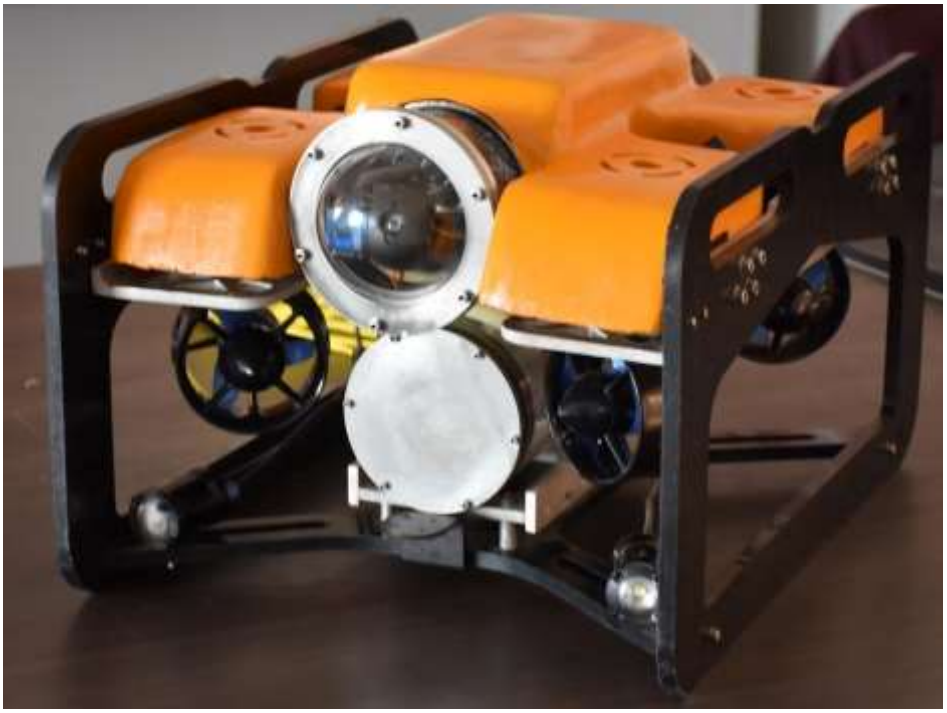
Side View of AUV

Top View of AUV



Front View of AUV

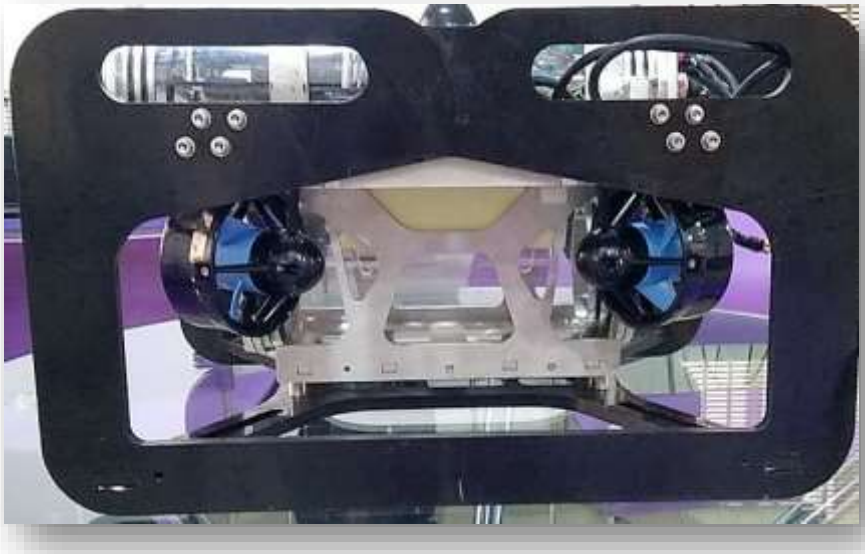
FABRICATED MODEL



Isometric View of AUV

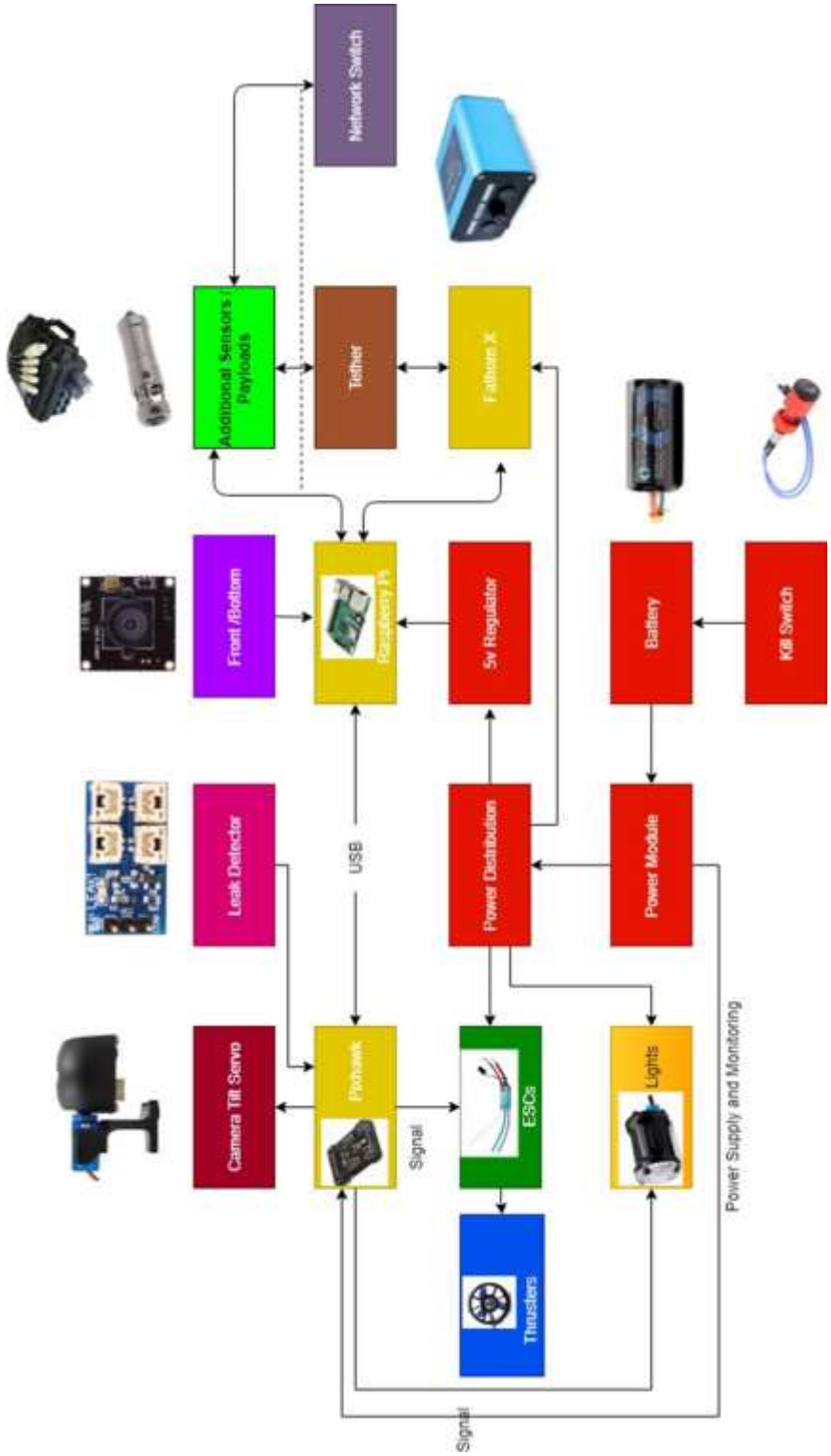
400mm

FrontView of AUV



500mm

Sideview of AUV



Basic Architecture