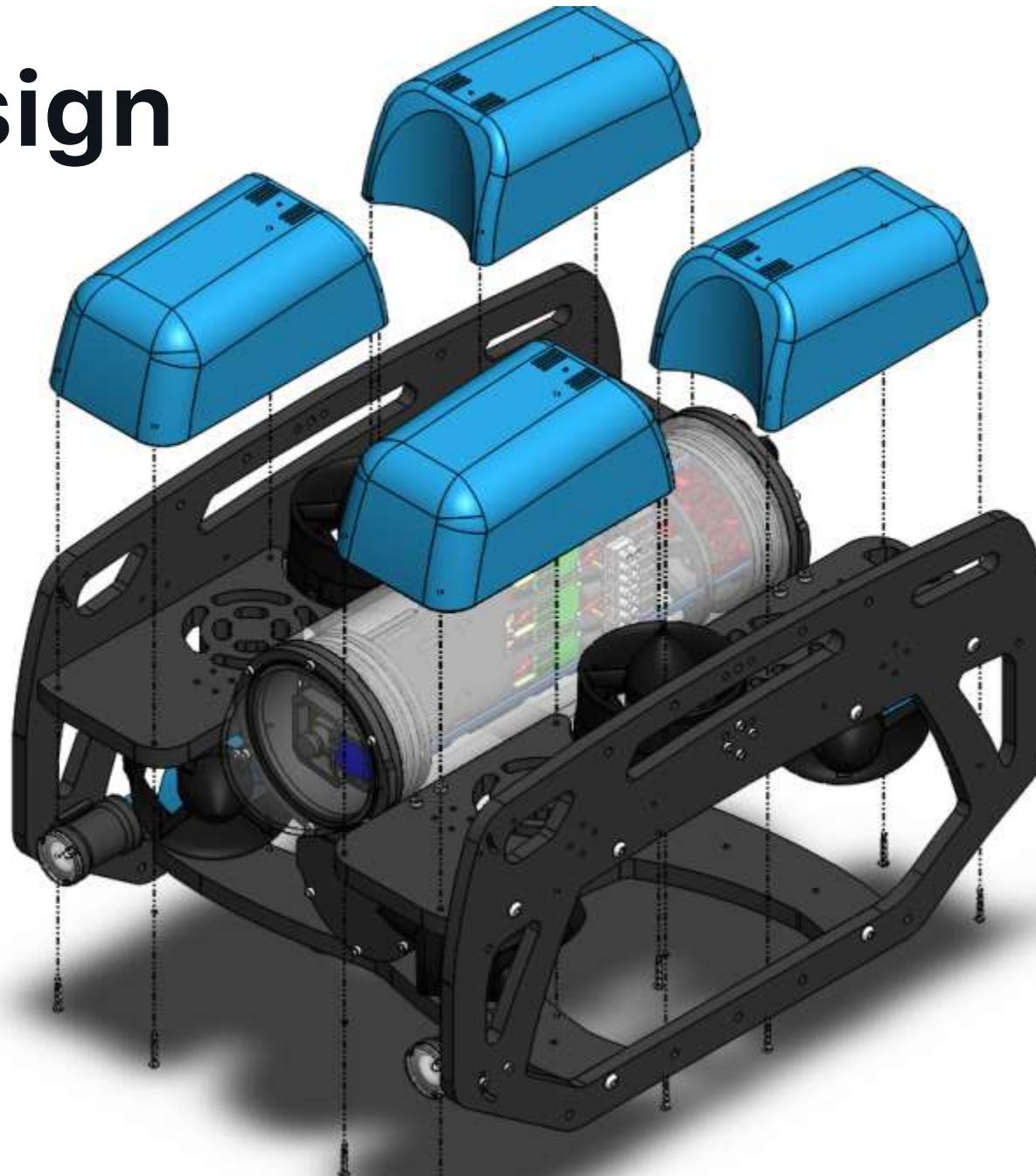


Remotely Operated Vehicle(ROV)

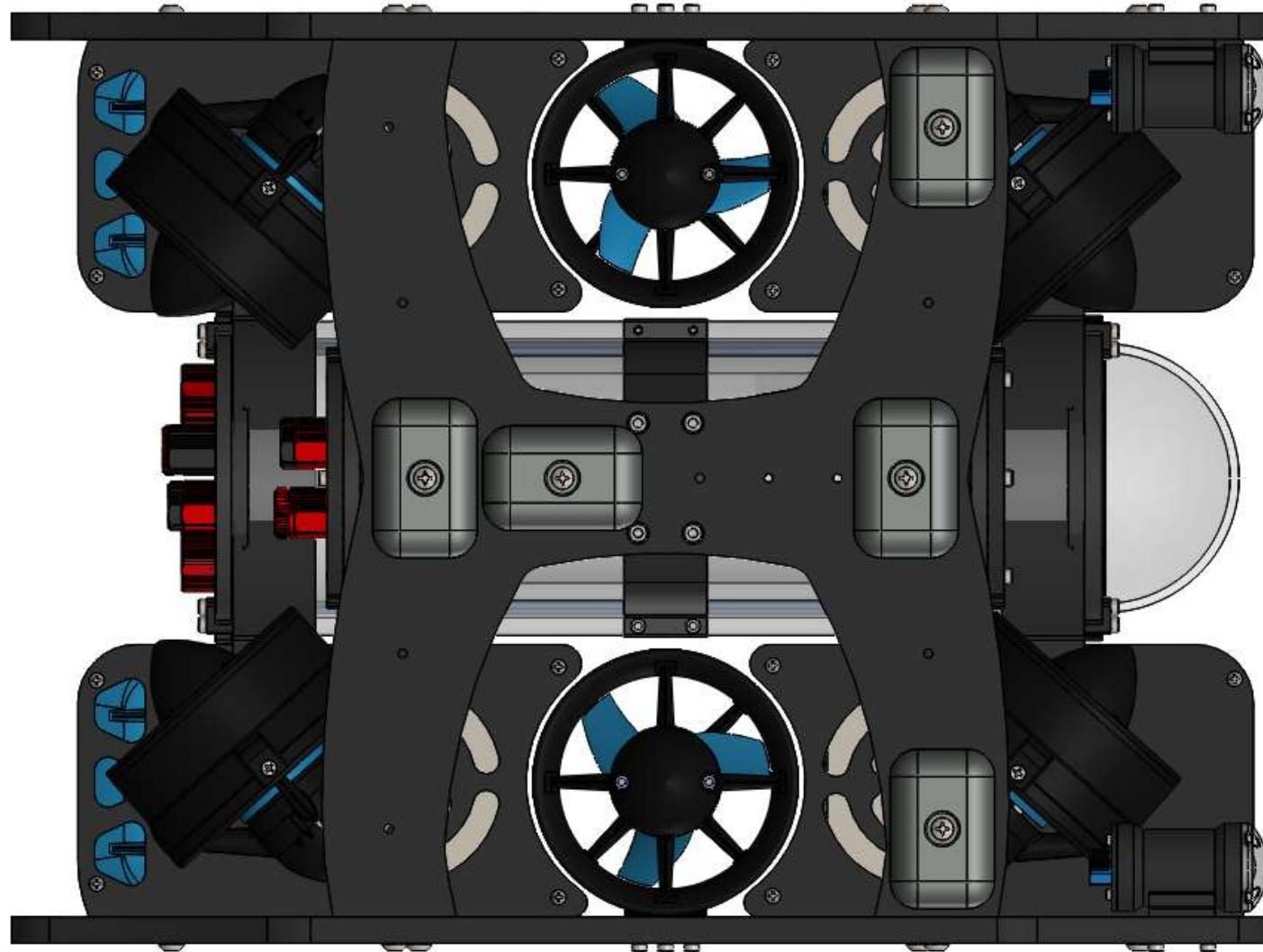
Outline

- Hull design
- Locomotion system
- Navigation system and control
- Data collection
- Data transmission
- Power management

Hull design



Hull design

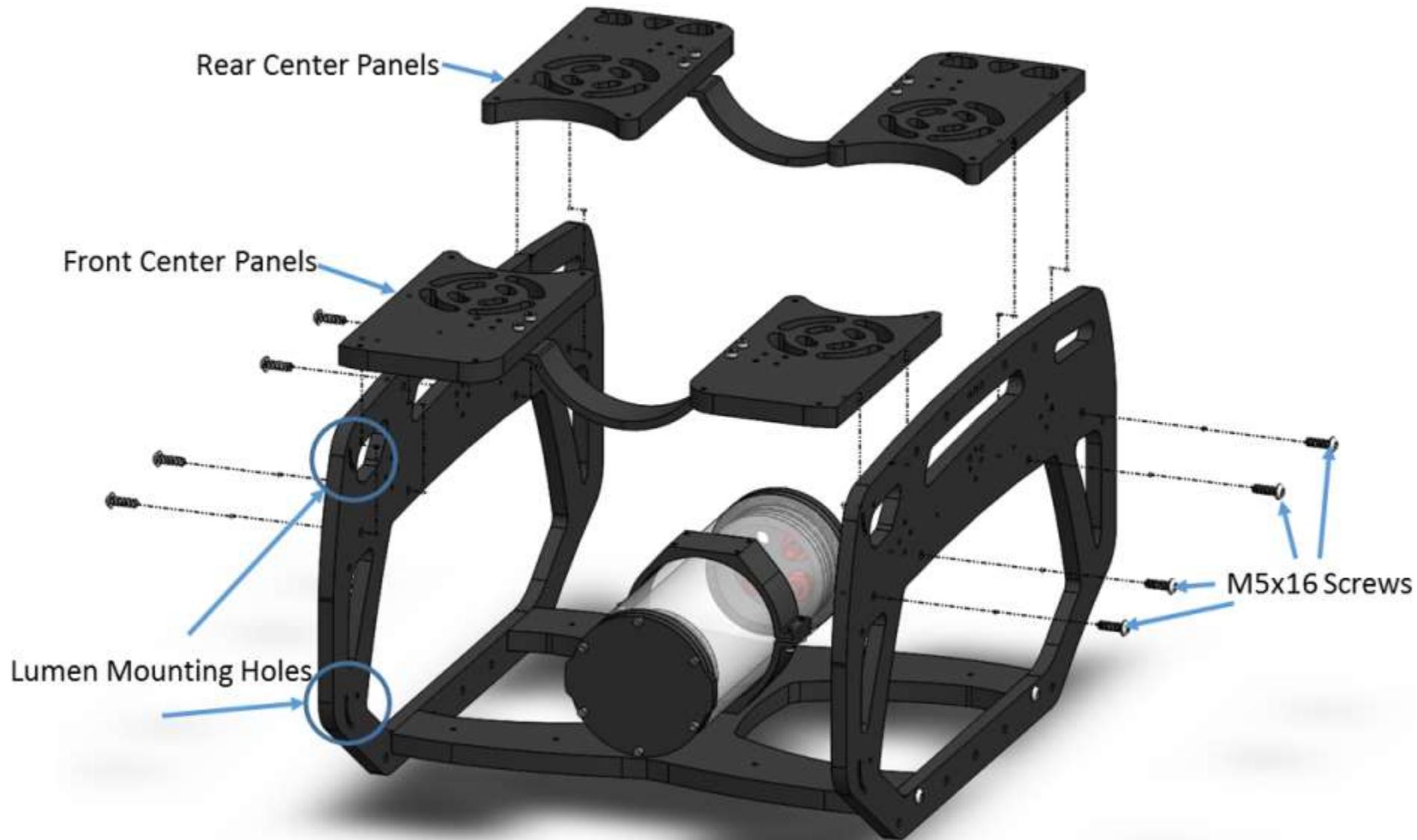


Hull design

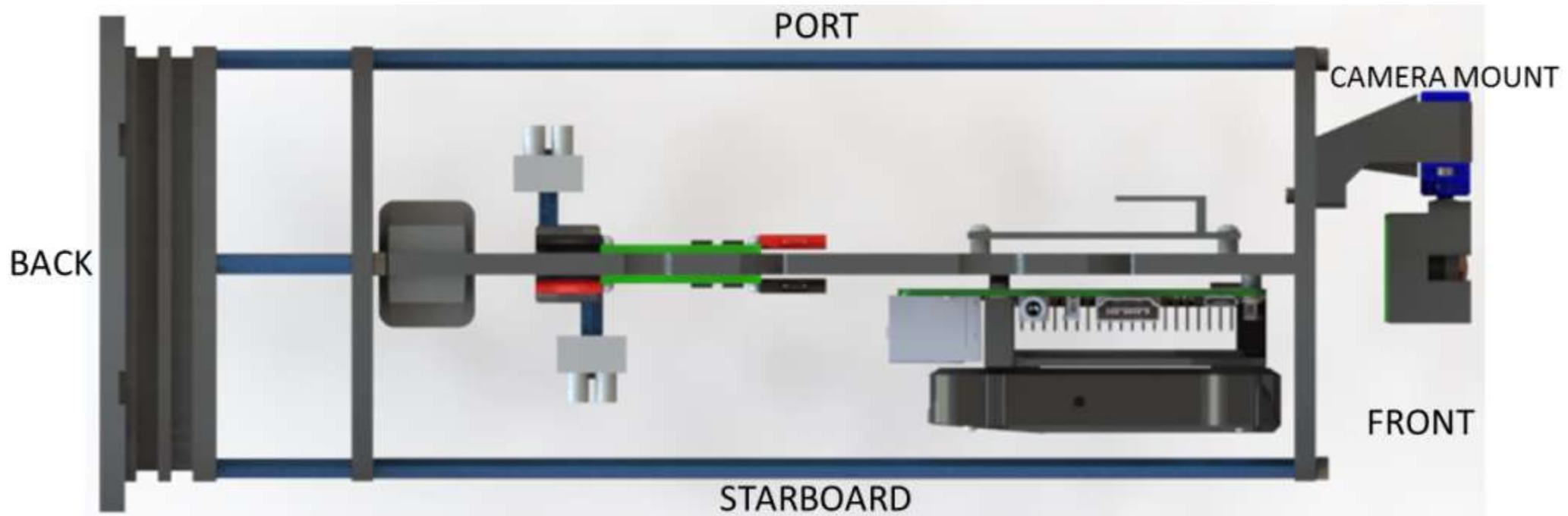
Physical

Length	457 mm	18 in
Width	338 mm	13.3 in
Height	254 mm	10 in
Weight in Air (<i>with Ballast</i>)	10-11 kg	22-24 lb
Weight in Air (<i>without Ballast</i>)	9-10 kg	20-22 lb
Net Buoyancy (<i>with Ballast</i>)	0.2 kg	0.5 lb
Net Buoyancy (<i>without Ballast</i>)	1.4 kg	3 lb
Watertight Enclosure Inner Diameter	102 mm	4 in
Watertight Enclosure Inner Length	298 mm	11.75 in
Cable Penetrator Holes	14 x 10 mm	14 x 0.4 in
Construction	HDPE frame, aluminum flanges/end cap, & acrylic tubes	
Main Tube (<i>Electronics Enclosure</i>)	Blue Robotics 4" Series w/ aluminum end caps	
Battery Tube	Blue Robotics 3" Series w/ aluminum end caps	
Buoyancy Foam	R-3318 urethane foam rated to 244 m	
Ballast Weight	6 x 200 g stainless steel weights	
Battery Connector	XT90	

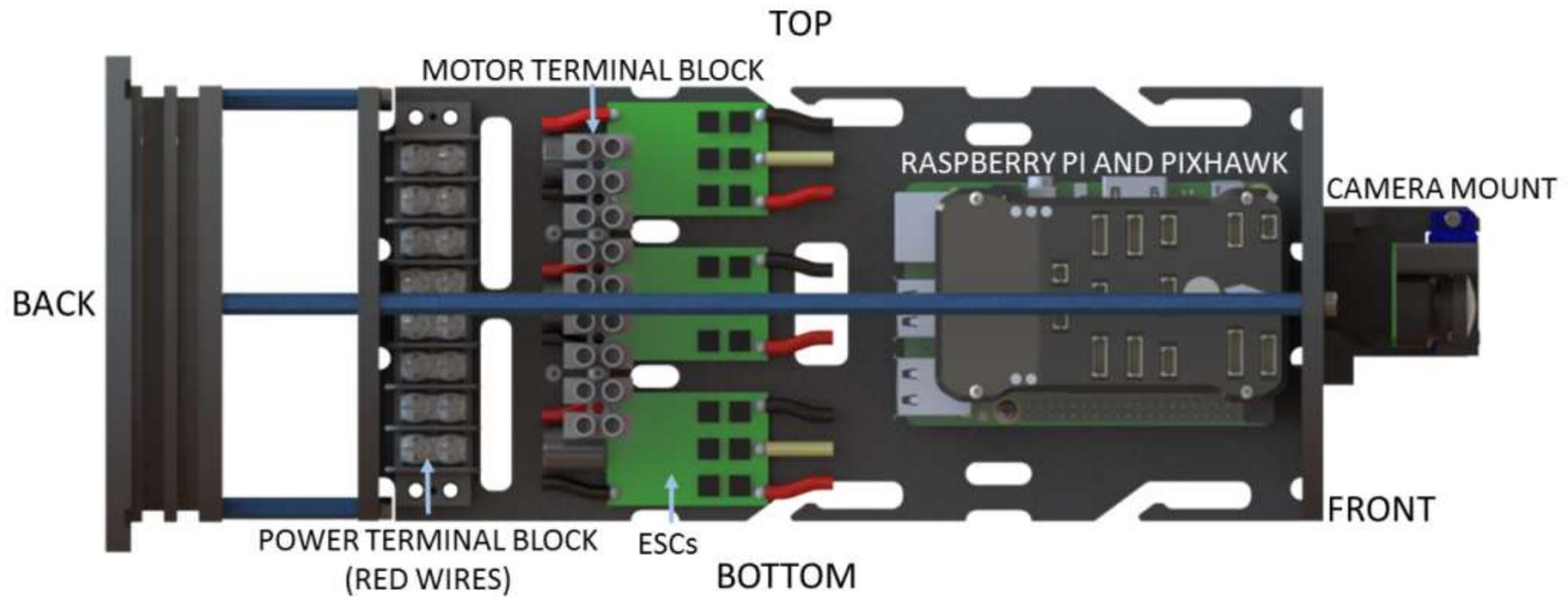
Center panel assembly



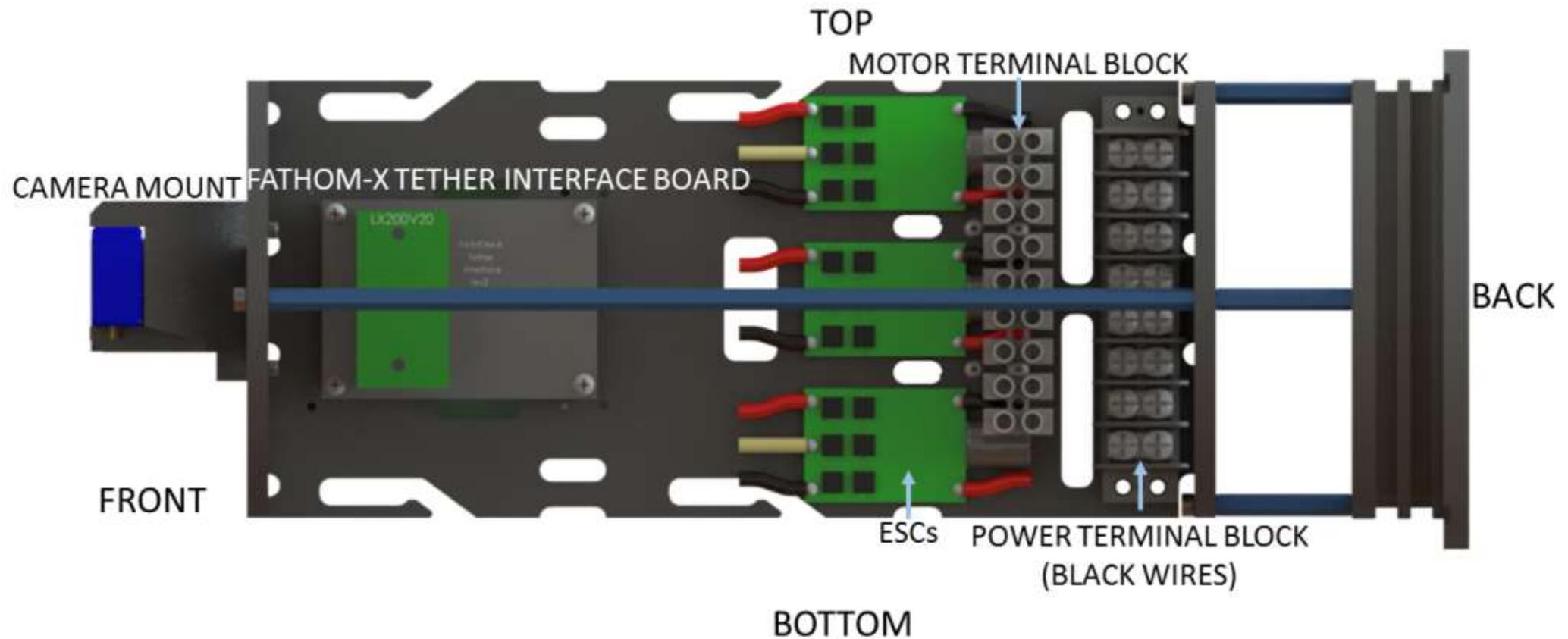
Electronics enclosure



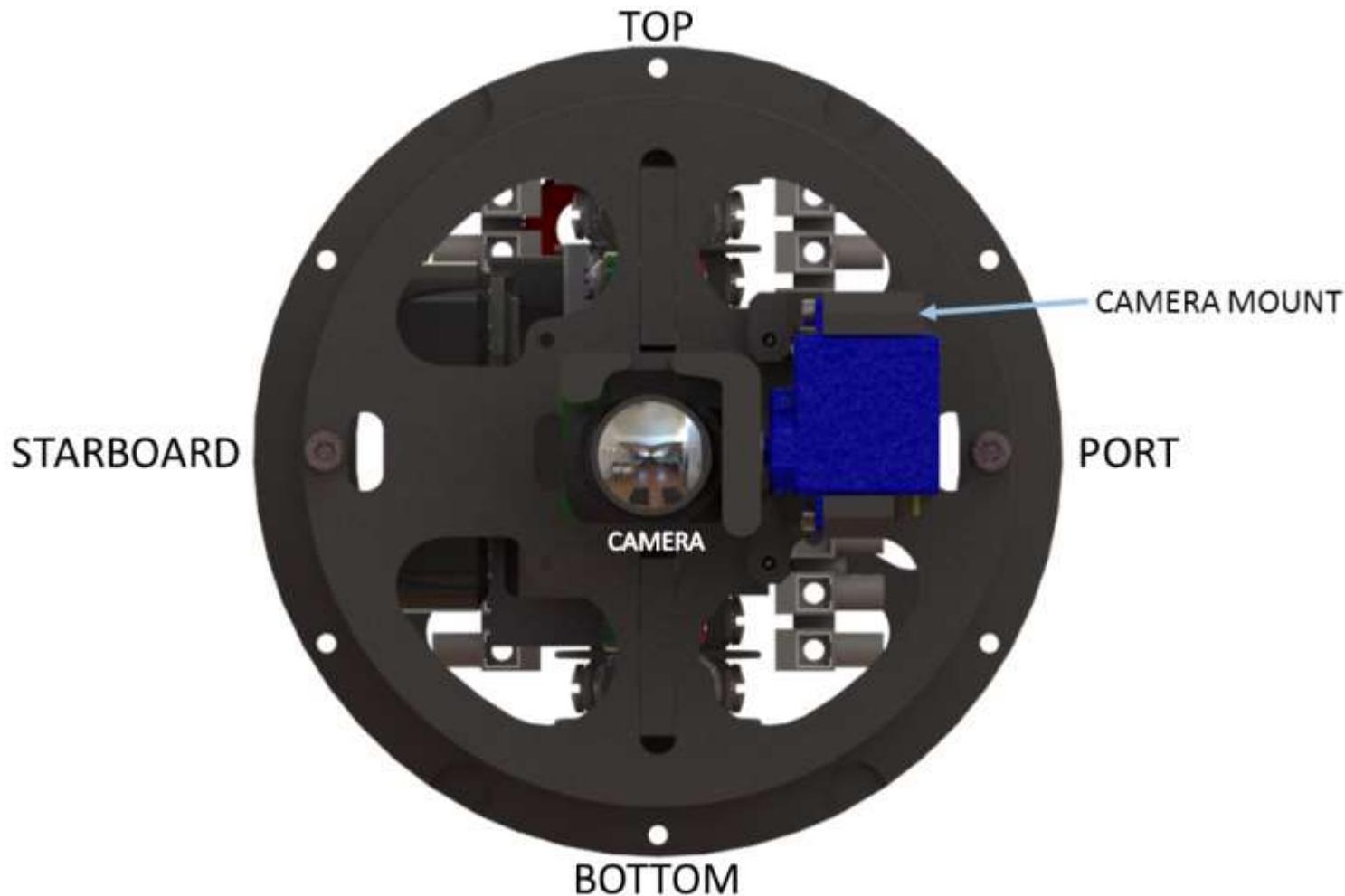
Electronics enclosure



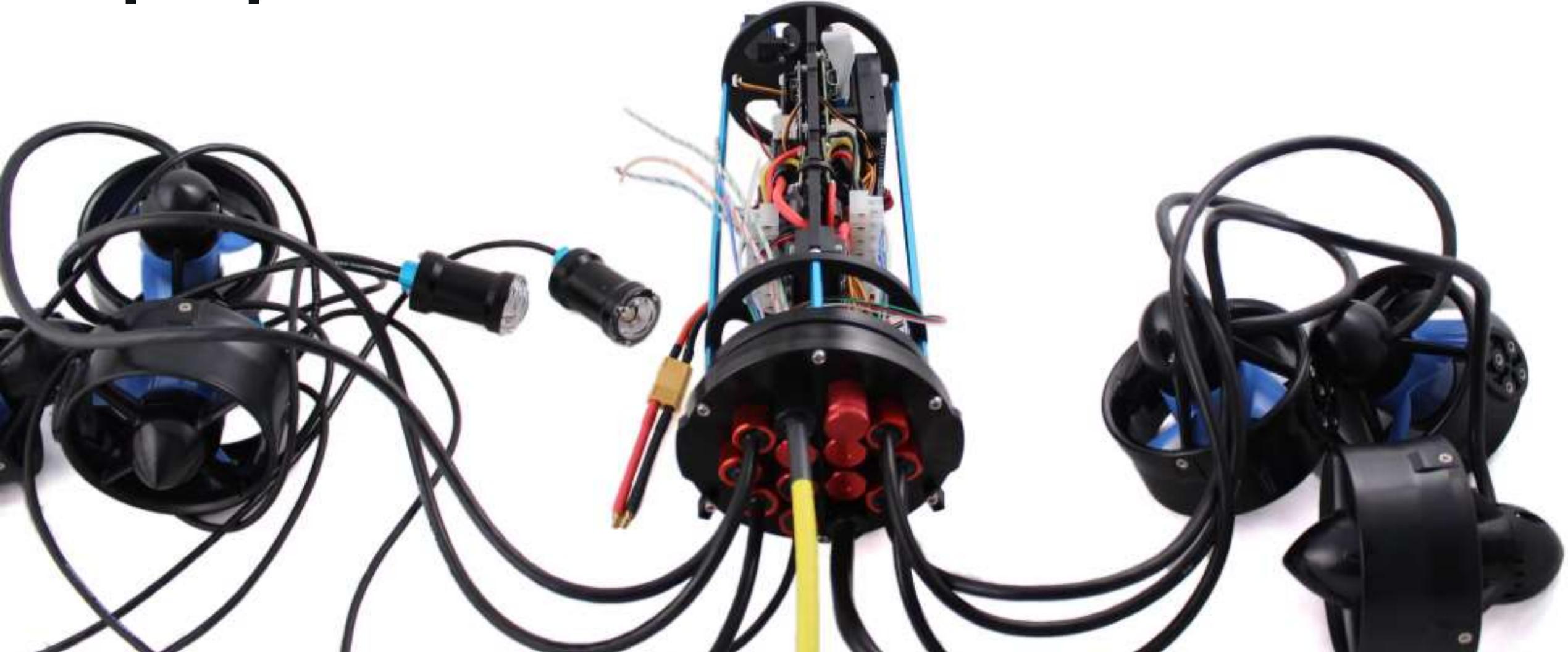
Electronics enclosure



Electronics enclosure



Electronics enclosure with propellers installed



Gripper

UPDATED



Newton Subsea Gripper

\$439.00

The Newton Gripper provides the *BlueROV2* and other subsea vehicles with the ability to interact with the subsea environment to retrieve objects, attach recovery lines, or free a snagged tether! Includes everything needed for installation on the *BlueROV2*.

In stock

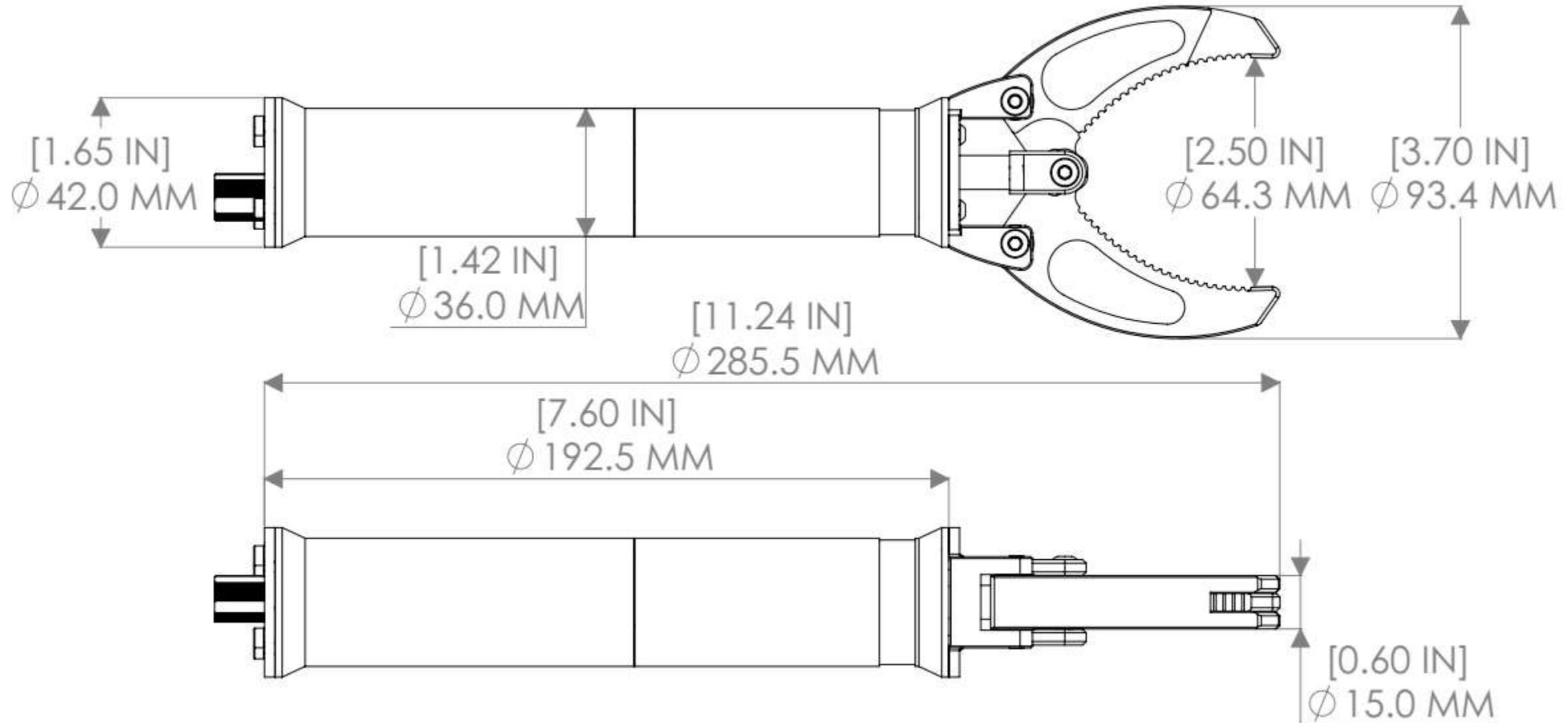
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Add to Cart

SKU: NEWTON-GRIPPER-ASM-R2-RP

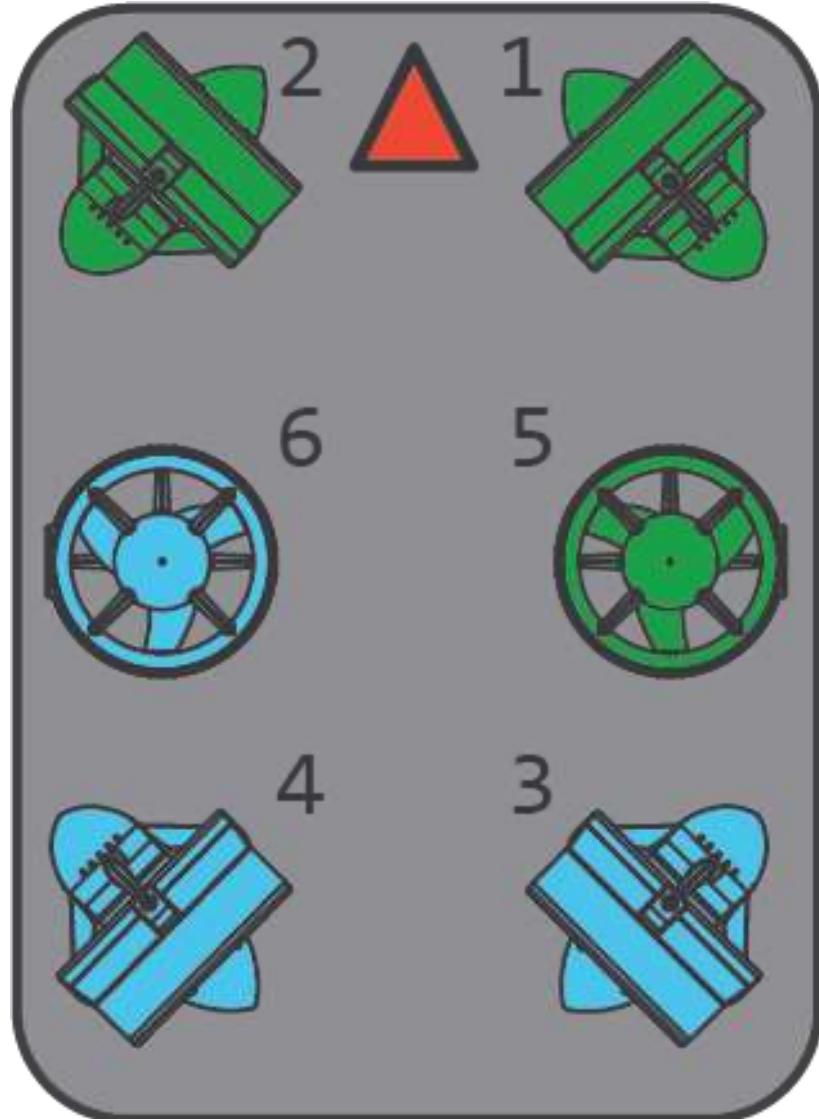
HS Code: 8501.10.60

Gripper



Locomotion system

- 3 x T200 Thruster with Clockwise Propeller
- 3 x T200 Thruster with Counter-Clockwise Propeller
- Electronic Speed Controller (ESC)



T200 Thruster



Q

T200 Thruster

FROM: \$179.00

The T200 Thruster is the world's most popular underwater thruster for ROVs, AUVs, surface vessels, and more! Its patented flooded motor design makes it powerful, efficient, compact, and affordable. The T200 is in use on thousands of marine robotic vehicles around the world including the *BlueROV2*.



New T200 Thruster orders have an approximate lead time of 1-2 weeks.

Select options:

Speed Controller

Available options:

\$206.00

In stock

Basic ESC – \$27.00 ▾

Your selection:

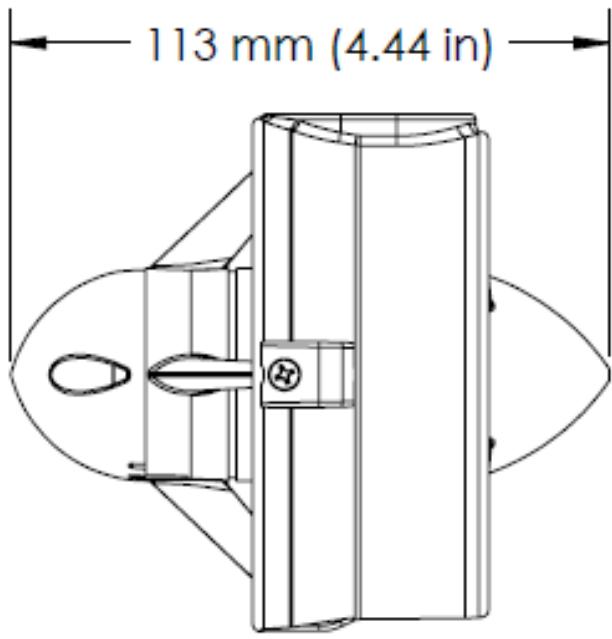
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Add to Cart

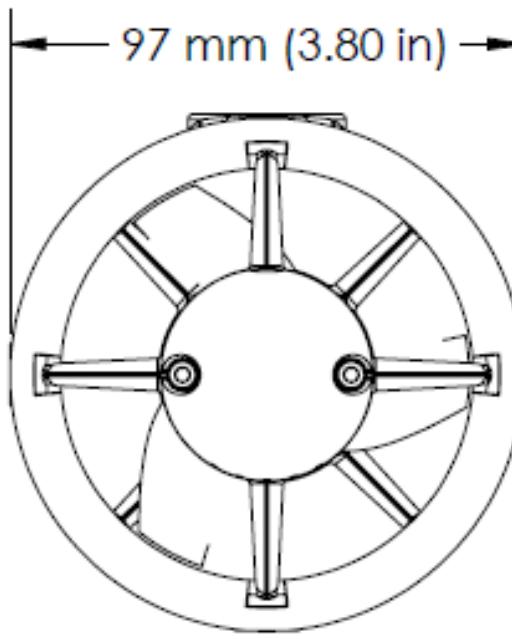
Basic ESC

Clear selection

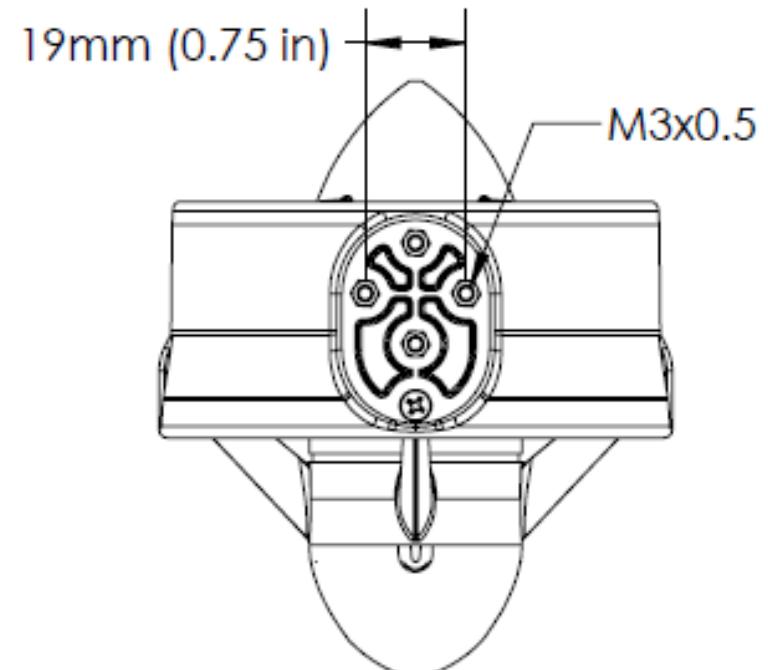
T200 Thruster



Side



Front



Top

T200 Rotor



Q

T200/M200 Rotor

\$40.00

In stock

1

Add to Cart

SKU: T200-ASM-ROTOR-R3-RP

HS Code: 8406.90.20

Electronic Speed Controller (ESC)



Basic ESC

\$27.00



A simple electronic speed controller for the T200 Thruster. It's based on the BLHeli ESC design with upgraded features and performance!

In stock

1

Add to Cart

SKU: BESC30-R3

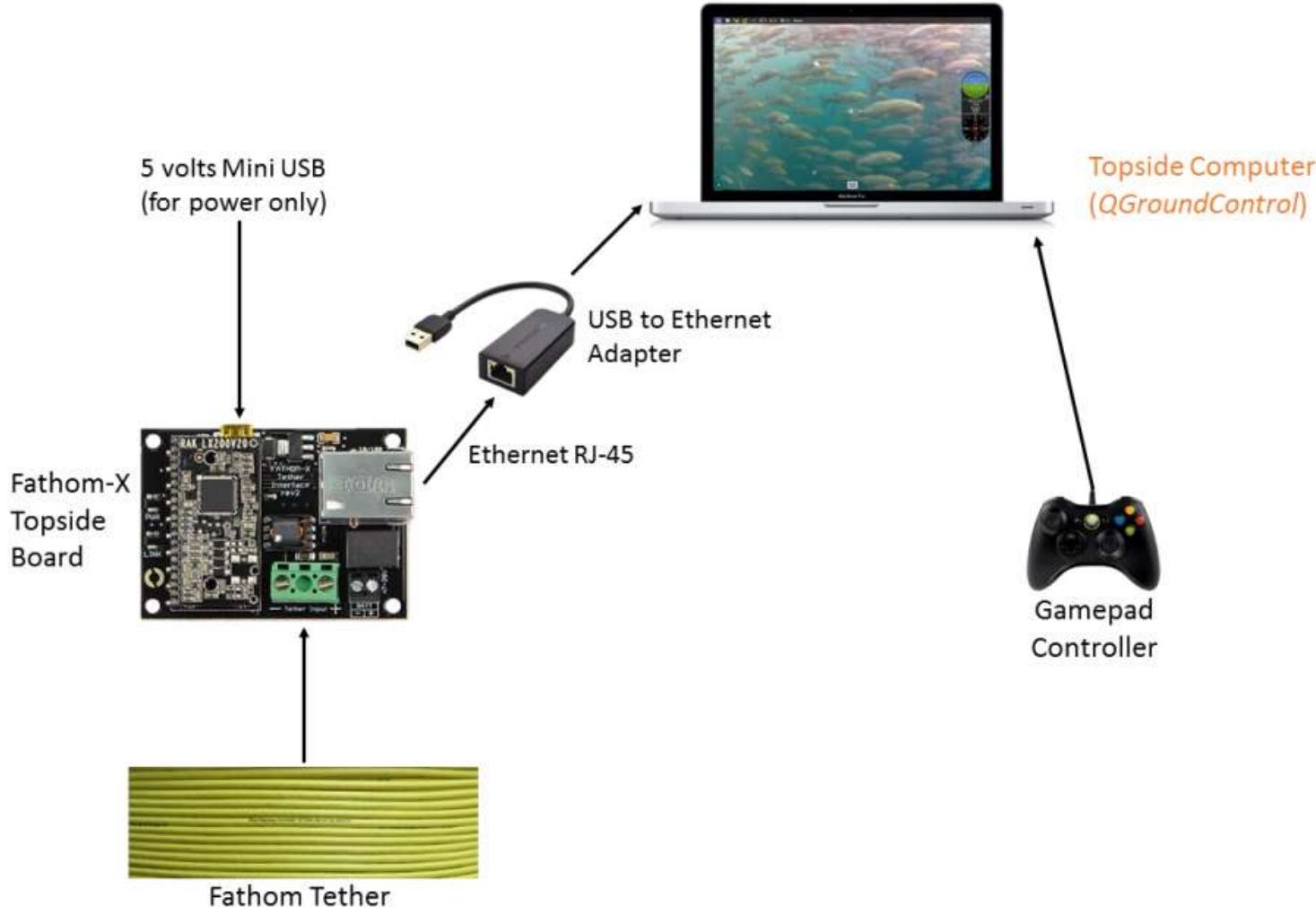
HS Code: 8504.40.40

Locomotion system

Performance

Maximum Rated Depth	100 m	330 ft
Maximum Forward Speed	1.5 m/s	3 knots
Thrusters	Blue Robotics T200	
ESC	Blue Robotics Basic 30A ESC	
Thruster Configuration	6 thrusters	8 thrusters
	- 4 Vectored	- 4 Vectored
	- 2 Vertical	- 4 Vertical
Forward Bollard Thrust	9 kgf	20 lbf
Vertical Bollard Thrust	7 kgf	16 lbf
Lateral Bollard Thrust	9 kgf	20 lbf

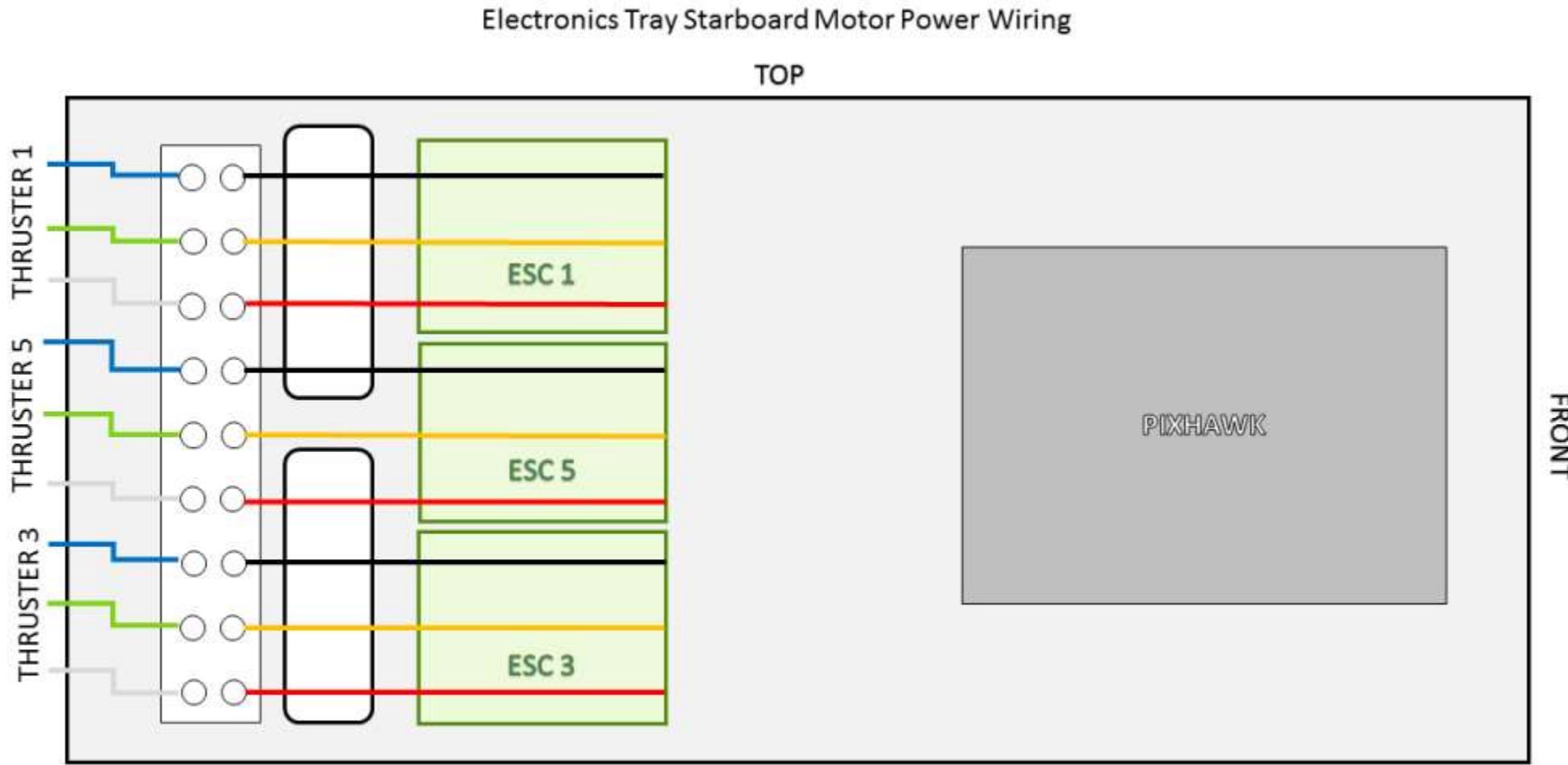
Navigation system and control



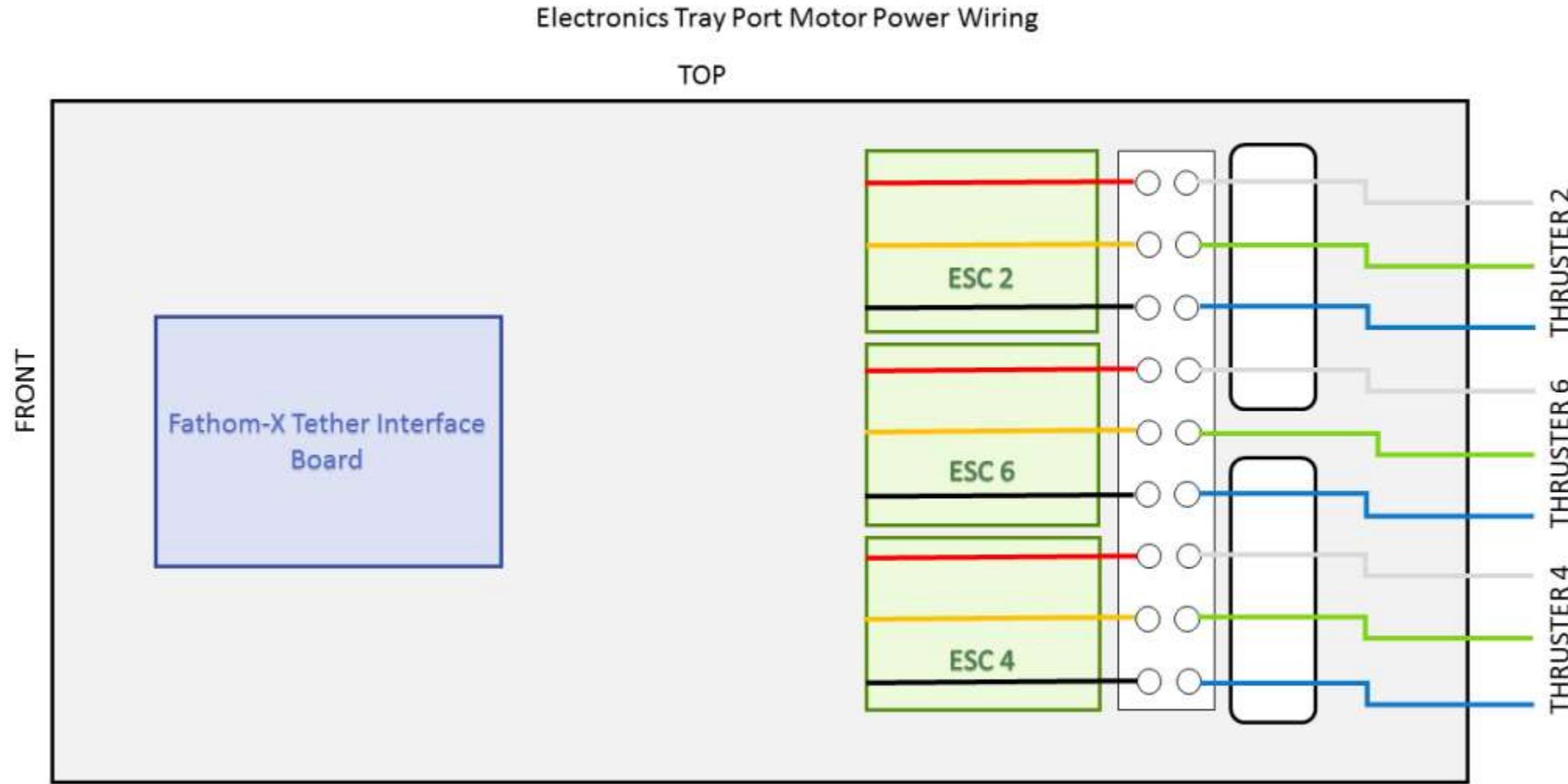
Joystick Manual



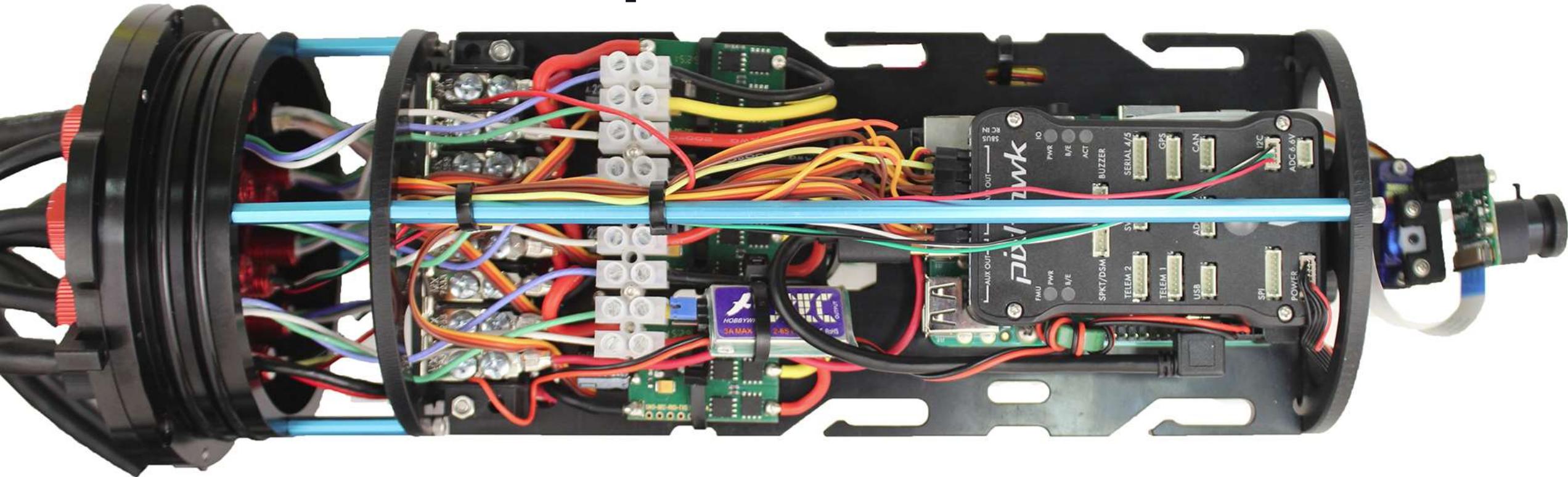
Navigation system and control



Navigation system and control

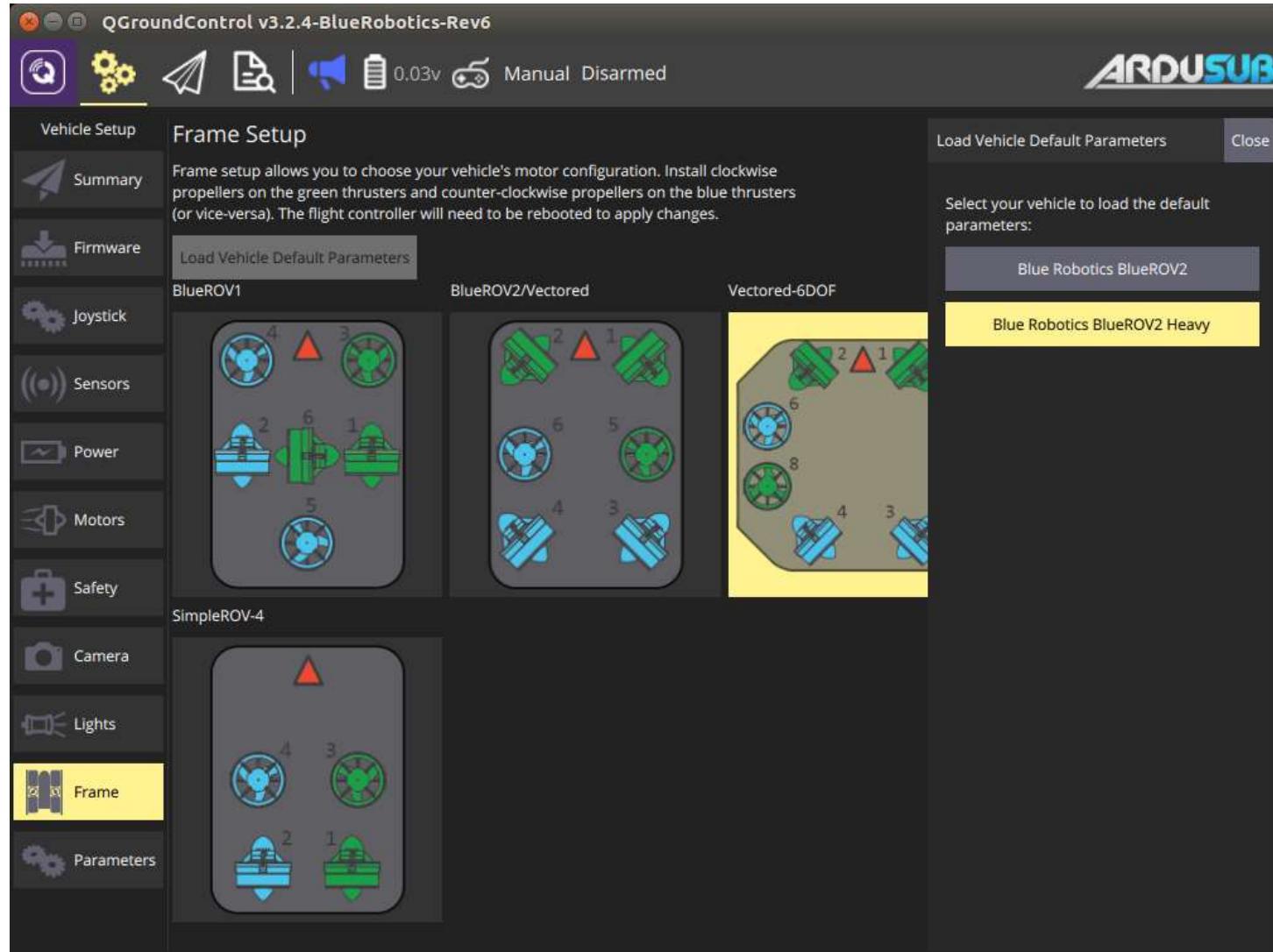


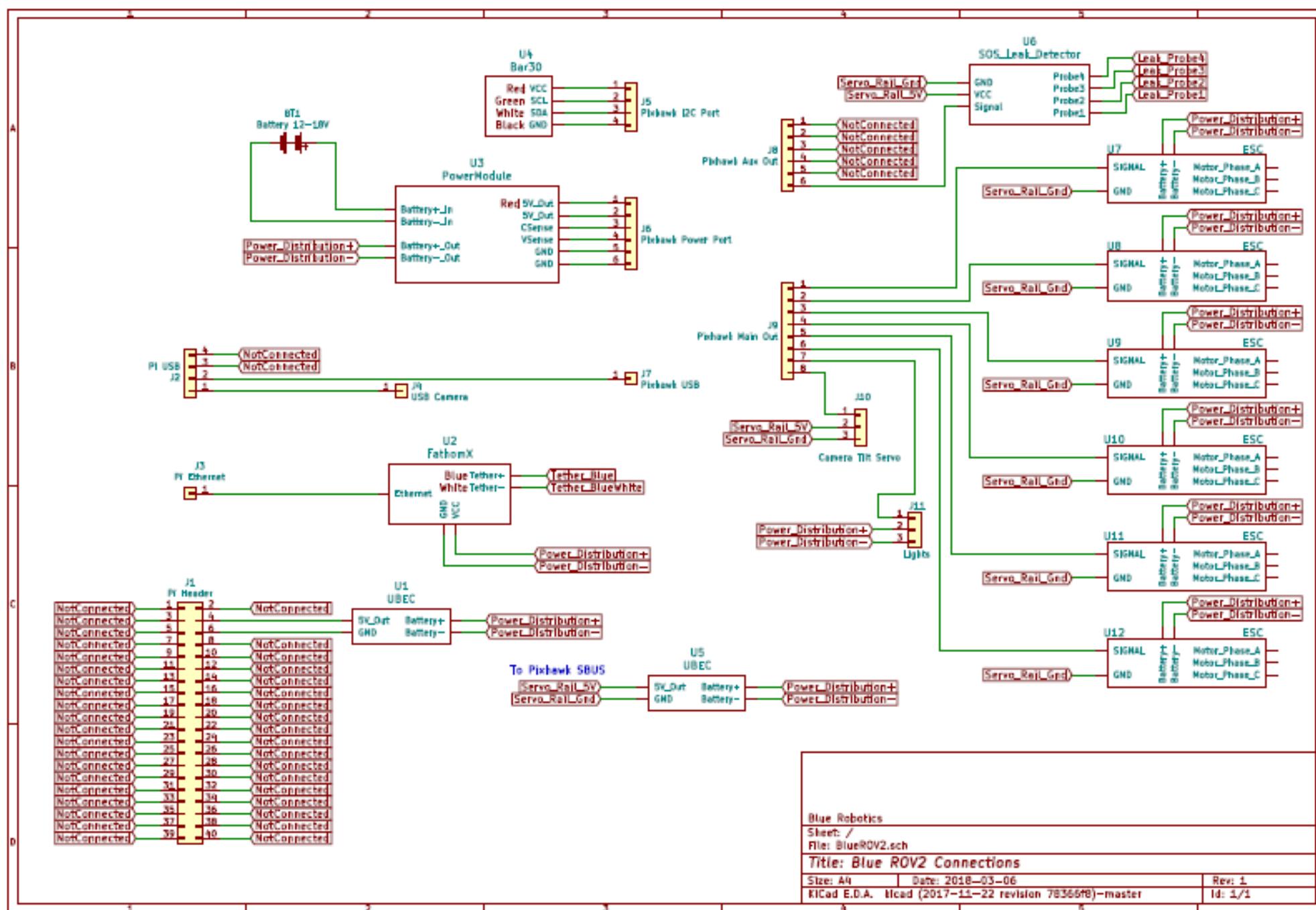
Onboard Computers



- Pixhawk for autopilot
- Raspberry Pi companion computer

ArduSub QGroundControl software





Data collection

Camera

Camera	1080p digital, USB, Low Light
Camera Field of View	80 degrees horizontally
Tilt Range	+/- 90 degree camera tilt (<i>180 total range</i>)
Tilt Servo	Hitec HS-5055MG

Sensors

- 3-DOF Gyroscope
- 3-DOF Accelerometer
- 3-DOF Magnetometer
- Internal barometer
- Blue Robotics Bar 30 Pressure/Depth & Temperature Sensor (*external*)
- Current and Voltage Sensing
- Leak Detection

Data transmission



- Fathom-X Tether Interface (FXTI)
- Has USB-to-ethernet converter and other expansions

Data transmission

Tether

Diameter	7.6 mm	0.30 in
Length	25-300 m	80-980 ft
Working Strength	45 kgf	100 lbf
Breaking Strength	160 kgf	350 lbf
Strength Member	Kevlar with waterblock	
Buoyancy in Freshwater	Neutral	
Buoyancy in Saltwater	Slightly positive	
Conductors	4 twisted pairs, 26 AWG	

Power management



Battery (*can be changed in about 30 seconds*)

Battery Life (*Normal Use*) 2-3 hours w/ 18Ah battery

Battery Life (*Light Use*) 4-6 hours w/ 18Ah battery



Thank you