

Blue Robotics

# BlueROV2

## The World's Most Affordable High-Performance ROV



Ocean research, exploration, and adventure are all made easily accessible by our flagship product, the BlueROV2. It provides the capabilities of a high-end commercial mini-ROV at the price of the most basic commercial ROVs, making the BlueROV2 the world's most affordable inspection and research-class subsea vehicle.

The smooth, stable, and highly maneuverable ROV is comprised of six thrusters, electronics and battery enclosures, and a rugged frame. Powerful but dimmable lights provide excellent illumination for the live HD video feed.

Like all Blue Robotics products, we created the BlueROV2 with high-quality parts, meticulous design, and rugged reliability with proven success in the field.

Equipped with six powerful T200 thrusters and Basic ESCs, the BlueROV2 has the best thrust-to-weight ratio in its class

to perform demanding tasks. It is ideal for operations in shallow to moderate waters, with a standard 100m depth rating and up to 300m tether lengths available.

The BlueROV2 uses the open-source *ArduSub* software and PixHawk autopilot to provide autonomous capabilities rarely seen in mini-ROVs and hackability paralleled by none. Blue Robotics actively develops and updates its software to enhance the BlueROV2's functionality.

Your vehicle will arrive almost-ready-to-dive, with pre-built sub-assemblies and instructional materials to make the experience as straightforward and enjoyable as possible. Additional items including the topside computer, gamepad controller and batteries are not included.

At Blue Robotics, we are committed to creating quality products that are accessible to any explorer.

### Product Features

- Live Low-Latency 1080p HD Video
- Highly Maneuverable Vectored Thruster Configuration
- Stable and Optimized for Inspection and Research-Class Missions
- Easy to Use, Cross-Platform User Interface
- Highly Expandable with Three Free Cable Penetrators
- T200 Thrusters and Basic ESCs
- Standard 100m Depth Rating and up to 300m Tether Available
- Battery Powered with Quick-Swappable Batteries for Long Missions
- Open-Source *ArduSub* Control Software and Open-Source Hardware
- Available Single Function Manipulator and Tether Spool



Dare to Explore



# Blue Robotics BlueROV2 Technical Specifications

Revision 06/19

## 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	

## 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

## Tether

Diameter	7.6 mm	0.30 in
Length	200m	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	



## Lights

Brightness	4 x 1500 lumens each with dimming control
Light Beam Angle	135 degrees, with adjustable tilt

## 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

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

Battery Life <i>(Normal Use)</i>	2 hours w/ 10Ah battery
Battery Life <i>(Light Use)</i>	4 hours w/ 10Ah battery

