

Boxilsh LUNA

Underwater cinematography without compromise



About Boxfish.

Boxfish Research was founded by Craig Anderson and Ben King – two engineers with passion for diving, underwater exploration and photography. In 2016, they met while trialling home-built ROV's (remotely operated vehicles) at the same time and location in Auckland, New Zealand.

The duo were disappointed with the results of the trial, and felt ROV technology had been stagnant since the 90's. An avid underwater photographer, Craig had been forced to give up diving and was determined to create a solution that captured the same image quality. Boxfish Research is dedicated to making the best underwater robotics systems in the world that provide unmatched professional images at the surface. Our goal is to set the standard across the industry – join our revolutionary movement!

Over the course of 5 years, the co-founders and a growing team of engineers pushed the boundaries of existing technology, building ROV solutions with the best possible image quality, up to date control algorithms and smart engineering design.

Industry Challenges.

- Traditional underwater filming methods are usually time-consuming and require a lot of gear and numerous steps to start filming.
- Continuous tightening of safety regulations for commercial diving, and new Health & Safety requirements that make it complicated and expensive to involve divers in production.
- Restrictions on using divers in certain situations, including depth limits or access to remote locations.
- Current underwater robotics solutions are not sufficient and the camera quality is not good enough for professional videography.
- Concern about scuba divers causing disturbance to wildlife behaviour and scaring animals.







Introducing **Boxfish Luna**

Boxfish Solution

- Our aim is to be able to achieve more with less: the • Boxfish Luna is a small, lightweight package that can be carried on a plane and boat, and set up for diving within 10 minutes.
- We really see the future in replacing divers with underwater drones in situations that may be unsafe, which increases safety and lowers the costs of expeditions.
- The ROV housing and acrylic optical dome option allow Boxfish Luna to film up to 1,000m, well beyond divers' capability. Moreover, it is a compact yet sturdy and stable vehicle that can easily manoeuvre in confined spaces or strong currents.
- We have built an underwater drone with a unique layout that allows movement in a full six degrees of freedom, enabling similar shots to aerial drones to be captured.
- Our own underwater filming experiences (from ٠ Antarctica to remote islands in Papua New Guinea and the Arctic) show that most animals are curious or unconcerned about our ROVs.

A stable filming platform.

The Boxfish Luna is the next generation of Boxfish Research underwater drones for professional cinematographers and natural history filmmakers. It is designed to provide the fine control needed for precise movements and steady shots. With eight 3D-vectored thrusters, the Boxfish Luna offers true six degrees of freedom of movement for orientation in any direction.





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Monitoring of production quality video.

Enjoy full control over underwater lighting and camera position during underwater filming. The Boxfish Luna's surface console allows filmmakers to monitor uncompressed 4K footage on a 17-inch UHD screen with near-zero latency thanks to the latest fibre-optic technology and our patented fibre-optic connector.





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The Boxfish ROV really solves a lot of production issues when it comes to safety and the ability to communicate with your DOP and operator on the surface.

Anthony Plant

Director of Photography







Full control on the surface.



Auto/Manual Focus Mode



White Balance



Exposure Modes Aperture Priority Shutter Priority Manual Mode Program Auto Mode

Aperture

Full Control



Exposure Compensation



Internal Video and Image Recording Format



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Shutter Speed Range from 1/4 – 1/8,000 seconds



Switching Between Video and Photo Mode



ISO AUTO Range from 160 – 409,600

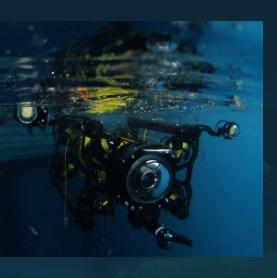
Interchangeable Lenses



Zoom/Focus Gear Control



Interchangeable Optical Domes – Glass or Acrylic



Opens up new movements.

Scuba divers can disturb some marine species. The Boxfish Luna allows to get much closer to marine mammals and fish than divers and captures decisive moments with unprecedented quality.



No Health & Safety, no worries.

In unsafe situations, using an underwater drone lowers the cost of the expedition, with no need for additional paperwork!

Clean imagery and quick deployment.

From plane to boat, to dive, the Boxfish Luna is an easy system to transport, setup and drive. Setup and deploy within minutes of arriving on site, all manageable by a two person team.



Reach new depths and access remote locations.

The ROV housing and acrylic optical dome option allow Boxfish Luna to film up to 1,000m if required. The drone is lightweight, portable and compact, able to access remote locations and confined spaces.



Filming without human disturbance.

Scuba divers can disturb some marine species. The Boxfish Luna gets much closer to marine mammals and fish than divers can, capturing natural wildlife behaviour that will leave audiences in awe.



Boxfish Luna 8K Boxfish Luna 4K

Patented active stabilisation and eight 3D-vectored thrusters layout for orientation in any direction

Interchangeable large semi-hemispheric precision optical dome for excellent image quality. Acrylic 200mm dome for deep water and/or glass 250mm dome for shallow water filming.

Full frame 8K 30p and 4K 60p/120p recording. 4K30p ProRes RAW and 8K 30p 10-bit 4:2:2 recording at the surface from the Sony α1 Full frame 4K 30p 10-bit 4:2:2 and 4K 30p ProRes RAW recording at the surface. 4K 60p/120p recording to internal card from the Sony A7SIII

50MP stills

12MP stills

High sensitivity up to ISO 102,400 High sensitivity up to ISO 409,600

MF/AF and push-to-focus modes, super-fast face detect autofocus to capture the most fleeting moments

Interchangeable lenses: Default is a Sony FE 16-35mm f/4 Zeiss Lens that is suitable for most underwater scenes. Talk to us about other options.

2 x 8,500 lumen, high CRI, dimmable standard lights on adjustable arms for excellent lighting in all orientations, optional additional forward lighting

Two additional 180[°] field of view navigation cameras for exceptional situational awareness all the way around the vehicle

Integrated 3D compass, depth, internal humidity, battery and supply voltages sensors, dual IMU, leak detection, precision gyroscope, precision accelerometer

Up to 15-hour hover per charge provided by multiple 100Wh batteries permitted in checked baggage, actual run time dependent on operational conditions

Dimensions*: 71 x 44 x 35cm (28 x 17 x 14in)

Weight*: 25kg+ (55lbs+) (Salt water ballast)

Operating temperature: -10°C (14°F) to +45°C (113°F)

* Depends on configuration.



Boxfish Control Console

17" 4K primary monitor for real-time surface monitoring in built-in waterproof case

10" sunlight readable secondary navigation display

Full control of exposure, white balance, zoom and outstanding white balance control for underwater capture from the surface

High quality, physical controls for all primary functions and precise movements

Piloting assists: Depth hold, Position (attitude) holding, Trim (cruise control) and Automatic return to surface function

Tether on Tether Reel

Extremely durable, lightweight fibre optic to transfer digital signal with 10gbps over effectively unlimited distance

Tether diameter 2.7mm and length: 200m, optional 3,000m+

Manual winch with ruggedised fibre optic rotary joint

Standard Accessories

Ninja V+ external video recorder for recording up to 4K p30 10-bit 4:2:2 equipped with 2Tb SSD

Tether to console fibre connector cable

Magnetic key for powering on the drone

12V power cable

Vacuum pump, hose and fitting

Tools, spares, seals and cleaning accessories for minimum of 2 years hassle-free operation

Packaging Info*

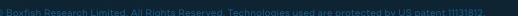
Boxfish Luna in Peli case 34kg (75lbs) or less than 30kg (66lbs) w/o batteries; case dimensions 80 x 52 x 40 cm (31 x 20 x 16in)

> Console and standard accessories in Peli case 22kg (49lbs); 63 x 50 x 37 cm (25 x 20 x 15in)

Tether on Tether Reel in Peli case 9kg (20lbs); 39 x 40 x 26 cm (15 x 16 x 10in)

* Deep-sea configuration







Find our representatives in your region or contact New Zealand headquarters directly **boxfish.nz/about/contact/**

Corporate Member



What's next?

Boxfish Research continues to improve our software and firmware to provide the best possible experience and the smoothest control. We are investigating assisted automation to help operators in capturing the best possible shots, along with accessories to navigate, understand and easily work with the natural underwater environment.

Boxfish Co-founders