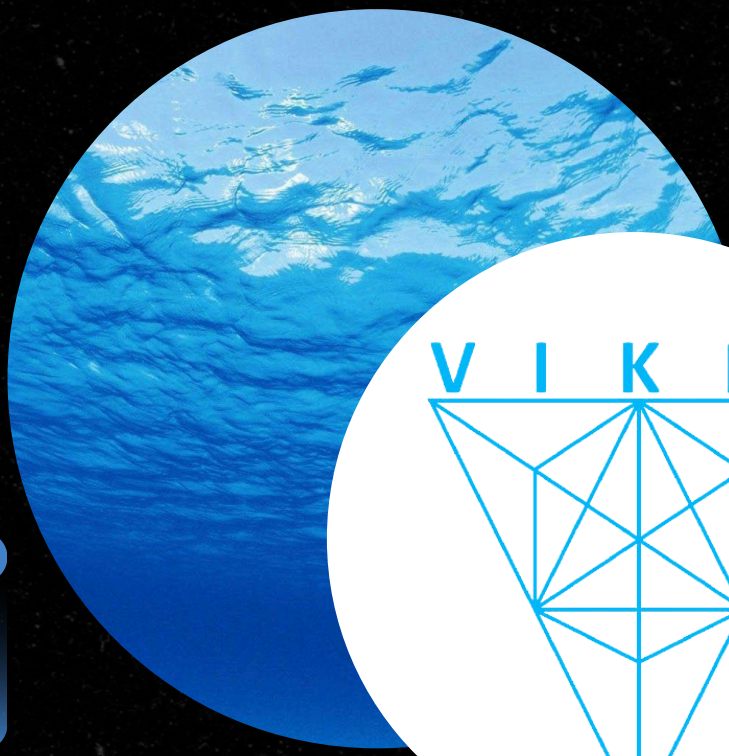
DIVE DEEP

VIKRA OCEAN TECH
PRODUCTS



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VIKRA OCEAN TECH

Overview

The strength of the Vikra lies in smart design and manufacturing. We are developing technology that will allow the fullest utilization of our marine and inland water bodies. Our current projects involve structural health inspection of dam, bridges and towers, periodic inspection of silt/ soil in the water bodies to enhance unobstructed flow in waterbodies. We also offer deep sea experimentation for academic and commercial entities.

WAVEBOT (Uncrewed surface Vessel)

WAVEBOT is an autonomous surface Vessels for hydrographic survey and rescue applications. Depends on the user requirement, multiple pay load can be added. Autonomous and manual mode can be switched using GUI. The GUI application runs on a base station laptop, connected through a telemetry link, and displays the vehicle's graphical positioning and progress against a background map of the survey area. Battery voltage remaining is monitored via this link. Switching from autonomous to remote control of the survey boat is easy using a high-power remote-control system that offers up to 2.5km range, with a survey endurance of 3 hours.

Specifications

- Dimensions-1.8x0.9x0.3 m
- Survey Speed- 2-3 Knots
- Draft -0.1 m
- Hull Material - GFRP
- Max. Payload Capacity-30 Kg
- Endurance – minimum 4 Hrs @ 2 Knots
- Range – 0.5 - 2 Km radius (Optional)
- Mode – Remotely Controlled & Autonomous
- Collision Avoidance - LiDAR
- Battery - 2 x 100 Ah Li-Ion with Voltage Display
- Pay Load Mount - Through Hull
- Pay Load - Option for Multiple Payloads
- Sonar: Single Beam Dual Frequency Echologger
- On Board Computer - Latest Gen Core I3 Processor with 8 GB Ram
- Sea State - 2
- RTK - GNSS system for centimetre level accuracy
- Connectivity - 5G , Radio Link Remote Control
- Camera - 2MP PTZ IP camera for FPV operation
- Ground Station Software - QGCS or Mission Planner
- Survey Software - Hypack
- Ground Control Station - 14" Laptop with Core i3 Processor

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WAVEBOT-II (Uncrewed Surface Vessel)

WAVEBOT-II is an Unmanned surface vehicle for hydrographic survey and surveillance applications. Depends on the user requirement, multiple pay load can be added. Autonomous and manual mode can be switched using GUI. The GUI application runs on a base station laptop, connected through a telemetry link (5G), and displays the vehicle's graphical positioning and status. Battery voltage is monitored via this link. Switching from autonomous to remote control of the survey boat is easy using a high-power remote-control system that offers up to 2.5km range, with a an endurance of 6 hours.

Specifications

- Dimensions-0.82x0.5x1.2 m
- Survey Speed- 2-3 Knots
- Draft -0.15 m
- Hull Material - GFRP
- Max. Payload Capacity-15 Kg
- Endurance – minimum 6 Hrs @ 2 Knots
- Range – 0.5 - 2 Km radius (Optional)
- Mode – Remotely Controlled & Autonomous
- Collision Avoidance - LiDAR
- Battery - 2 x 40 Ah Li-Ion with Voltage Display
- Pay Load Mount - Through Hull
- Pay Load - Option for Multiple Payloads
- On Board Computer - Latest Gen Core I3 Processor with 8 GB Ram
- RTK - GNSS system for centimetre level accuracy
- Connectivity - 5G , Radio Link Remote Control
- Camera - 2MP PTZ IP Night Vision camera
- Ground Station Software - QGCS or Mission Planner
- Ground Control Station - 14" Laptop with Core i3 Processor

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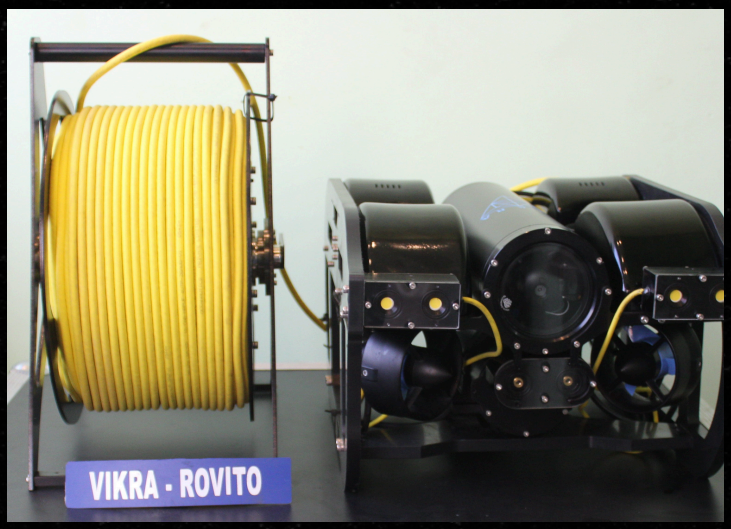
ROVITO (Remotely operated underwater vehicle)

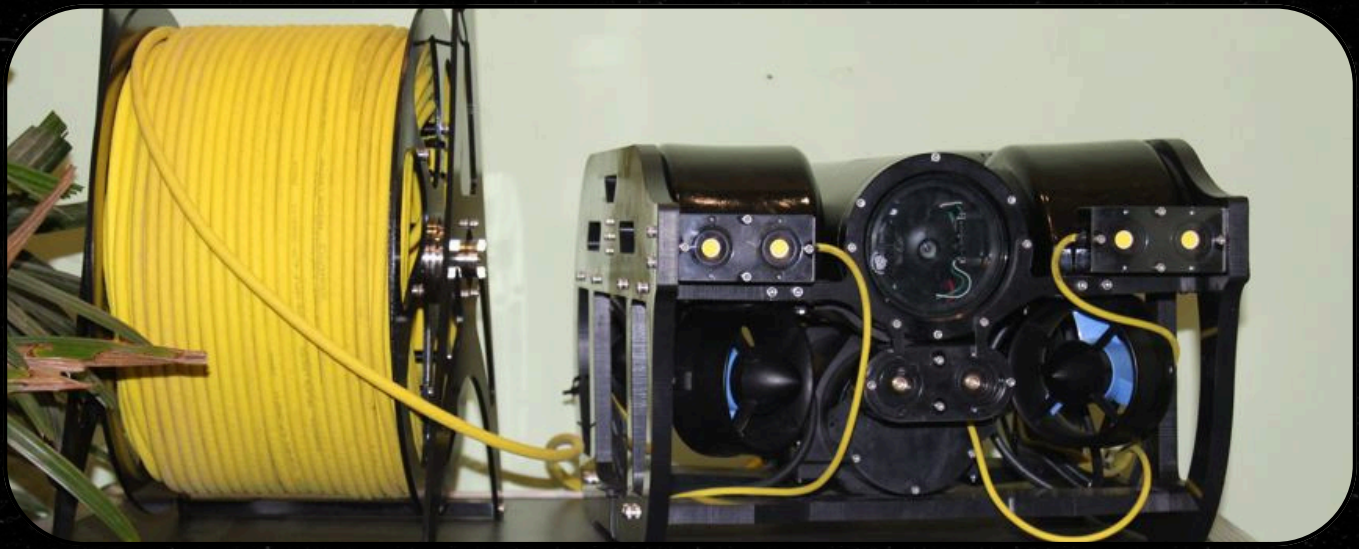
Overview

A Remotely Operated Vehicle (ROV) is a type of remotely controlled underwater robot or submersible used for a wide range of underwater tasks and operations. ROVs are typically unmanned and are operated by remote control from the surface. They are widely used in various industries, including marine exploration, offshore oil and gas, scientific research, military applications, and underwater infrastructure inspection and maintenance.



Inshore use of ROVs often reduces the need for divers to do visual inspections or in many cases ROVs make it easier for them to pinpoint work that needs to be done. When coupled with sonar, which allows precise navigation in murky waters and sharper profile images, our ROVs can perform a number of tasks to ensure the safety, purity and security of water supplies. This can also extend to pipelines with clarity at pressure depths that are hazardous for divers. The use of ROVs can increase safety and inspection quality, cut plant downtime, and also reduce costs.

Specifications



- Endurance capable -Min 120 min
- Size - 500x400x500mm
- Diving depth - 100m
- Rated Speed - 2 Knots
- Max Speed - 4 Knots
- No. of Thrusters - 6
- Communication -Tethered
- Tether length - 150m and Neutrally Buoyant
- Tether - Spool with slipring 150m
- Camera - 2 Nos 2MP 1080P and Offline 4K camera
- Lights - 4 x 1500 Lumens
- Weight - 9-10 Kg
- Buoyancy - Slightly Positive Buoyant
- Battery - 10000mAh li-ion rechargeable
- Pay Load - 1.5 Kg
- Ground Control Station - Laptop with latest core i3 processor

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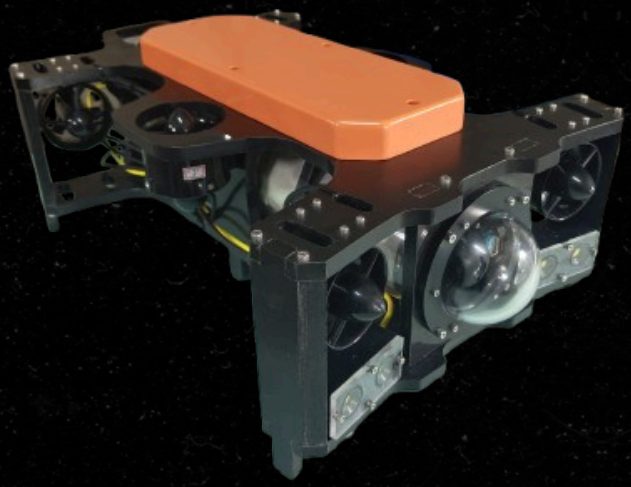
Black Mantis



Black Mantis is a Remotely Operable Vehicle for an Underwater surveillance and survey applications. Black Mantis can dive upto 100 m depth in an open water and can go upto 4 knots speed. Depends on the user, the payload can be integrated on the vehicle upto 0.8 Kg . The Vehicle is connected to the user through Ground Control Station(GCS). The communication between the GCS and the vehicle is achieved through the neutrally buoyant CAT6 cable. The 2 MP camera with 6000 lumens of light are very suitable for the underwater surveillance and survey applications.

Specifications

- Endurance capable - 2 hrs
- Size - 450x300x200 mm
- Diving depth - 100m
- Rated Speed - 2 Knots
- Max Speed - 4 Knots
- No. of Thrusters - 6
- Communication -Tethered
- Tether length - 50 m and Neutrally Buoyant (extendable upto 300 m)
- Camera - 2MP 1080P
- Lights - 4 x 1500 Lumens
- Weight - 8 Kg
- Buoyancy - Slightly Positive Buoyant
- Battery - 10000mAh li-ion rechargeable
- Pay Load - 0.8 Kg
- Ground Control Station - Laptop with i3 Processor

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Amphibious Crawling Robot

The amphibious crawling robot is a versatile and robust platform designed for underwater operations in shoreline, intertidal, and breakwater regions. Its modular architecture allows for easy integration of interchangeable payloads, enabling the vehicle to perform a wide range of tasks such as in-situ cone penetration testing, underwater cable tracking, and mine disposal using precision cutters or multi-function manipulator arms. Communication is established through a high-bandwidth Ethernet link, ensuring real-time control and data transmission. The robot supports seamless integration of advanced sensor modules, including high-resolution underwater cameras, LED lighting systems, hydrophones, sonar units, and CTD (Conductivity, Temperature, Depth) sensors, making it an ideal solution for inspection, intervention, and data acquisition in challenging nearshore environments.

Specifications

- Crawling Robot Weight : 45 Kg
- Payload Weight : 25 Kg
- Operational Depth Upto 100 m
- Material: AL6061 T6 - Anodised Black
- Capability to crawl on the softer soil with 2Kpa bearing strength
- Grade upto 45 Degrees in Underwater and Surface
- Crawling speed max .3.6 Kmph/2.5 Kmph
- Stable upto 5 Knts
- Range: Wireless 4-5 Km* (Surface) , Wired-250m (Underwater)
- Sensors: Depth Sensor, Forward looking Sonar
- Camera: 2MP Underwater Camera 2 Nos
- Lights : 4 Nos 1500 Lumens Underwater Light
- Dimension: 1 x0.9x0.4 m , Payload Extra.

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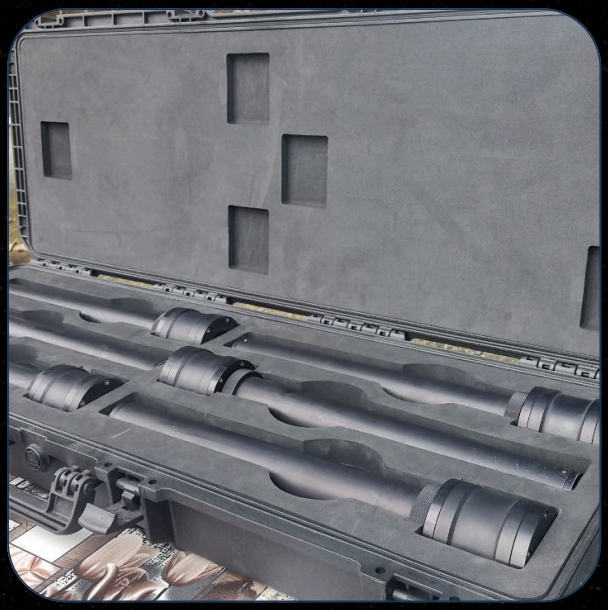
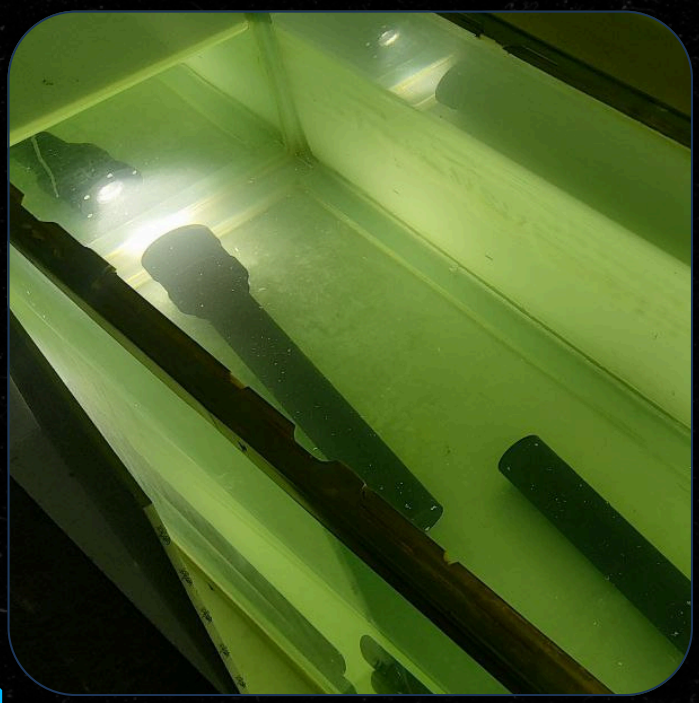
Underwater Light Battery Powered - LB15200

Overview

Battery powered Underwater light are typically specialized and built to withstand the extreme pressures and harsh conditions found in the deep ocean. These lights are commonly used in submersibles, scientific research equipment for deep-sea exploration. Lights used at such depths must be designed to withstand the immense water pressure. Deep-sea environments can be extremely cold, and lights are designed to operate at low temperatures.





These lights typically produce a high lumen output to provide sufficient illumination in the deep, dark ocean. LED technology is often used for its efficiency and brightness.The lights are designed to be easily integrated into the equipment, vehicles, or submersibles for which they are intended. Various mounting options, such as bolt-on or custom-designed mounts. These lights are specialized, expensive, and essential for the success of underwater missions in the deep ocean. Energy-efficient LED lights, which not only reduce energy consumption but also produce less heat, making them suitable for maintaining water temperature in aquatic environments.

Specifications

- Lumens - 1500
- Temperature - 5000K Cool White
- Power - 15 Watt
- Dimensions - 90 mm (Dia) x 496 mm (length)
- Weight - 3.2 Kg
- Beam Angle - 100 Deg
- Battery - Rechargeable Li-Ion
- Capacity - 11.4 V 7.5 Ah
- Material - AL-6061 Anodised and Glass/Acrylic
- Rated Depth - 2000 m
- Intensity Control - 4 stages with Timer Control
- Connectivity - USB 2.0/ USB 3.0
- Minimum Duration - 2 Hrs
- Software - Deep Light V2.0 (Windows)

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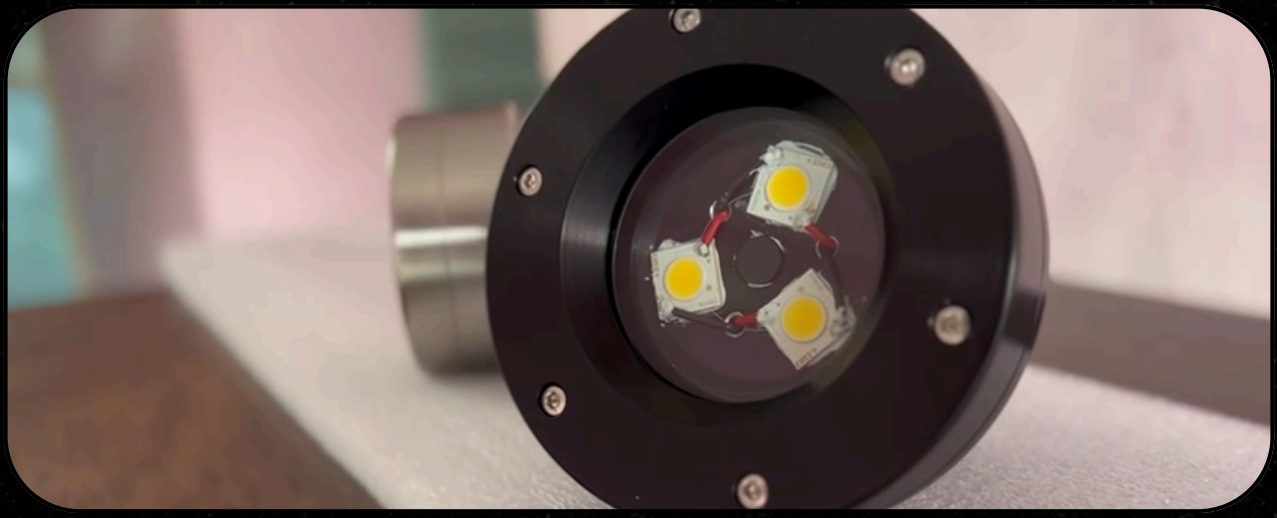
Underwater Light- L40010



Specifications

- Lumens - 4000
- Temperature - 5000K Cool White
- Beam Angle - 100 Deg
- Dimensions- 120 mm (Dia) x 88 mm (Length)
- Input Voltage - 12 V DC
- Material - AL-6061 Anodised and Glass/Acrylic
- Rated Depth - 100 m
- Intensity Control - Software Based
- Cable - Cat6 Under Water Cable
- Power Input - UPS powered

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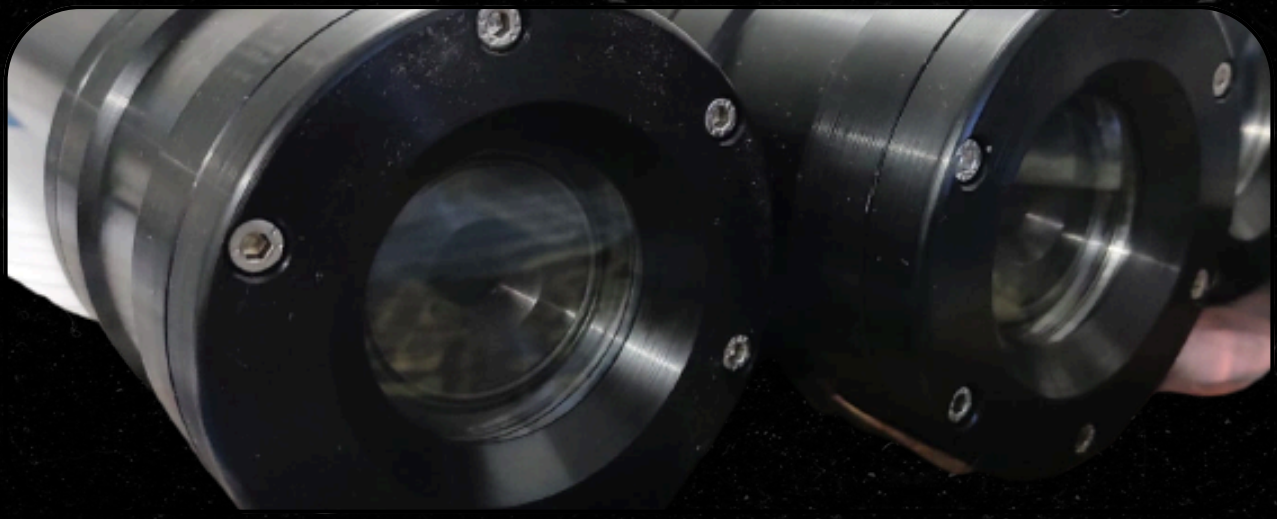
Underwater Light - L15010



Specifications

- Lumens - 1500
- Temperature - 5000K Cool White
- Beam Angle - 100 Deg
- Dimensions- 80 mm (Dia) x 100 mm (Length)
- Input Voltage - 12 V DC
- Material - AL-6061 Anodised and Glass/Acrylic
- Rated Depth - 100 m
- Intensity Control - Software Based
- Cable - Cat6 Under Water Cable
- Power Input - UPS powered

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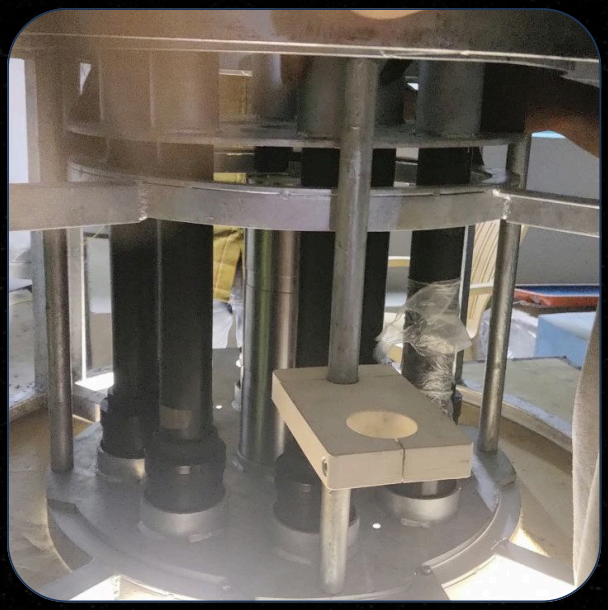
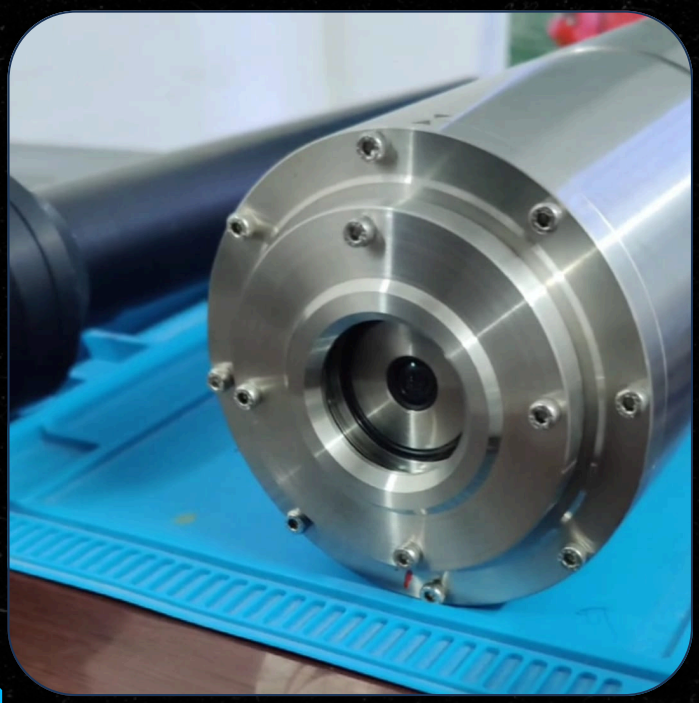
Underwater Camera Battery Powered - CB12200

Overview

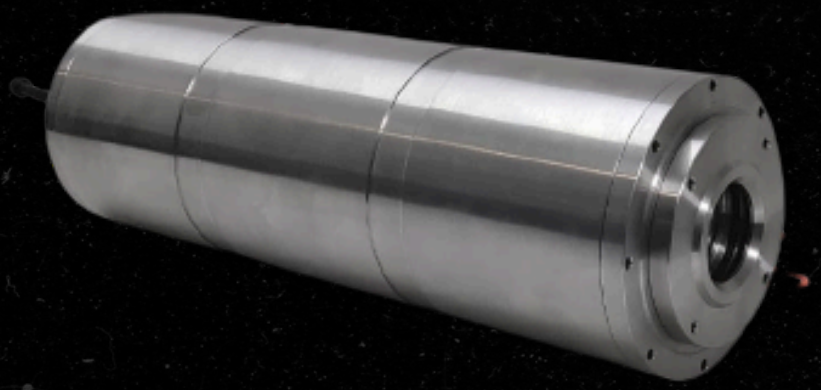
An Battery Powered underwater camera is a specialized camera designed to be used underwater, typically in aquatic environments like oceans, lakes, rivers or underwater ecosystems. These cameras are built to withstand the unique challenges and conditions of submersion and are used for various purposes, including research, photography, videography, and recreational activities at a depth of 2000mtr .





Depending on the intended depth of use, underwater cameras are designed to withstand varying levels of water pressure. Deep-sea cameras, for example, are built to withstand much higher pressure than those used in shallow waters. Scientists and researchers use underwater cameras to study marine life, ecosystems, and geological formations in the ocean. These cameras play a crucial role in marine biology, oceanography, and environmental research. Underwater cameras are used by search and rescue teams and law enforcement agencies for underwater search and recovery operations, such as locating submerged objects or evidence.

Specifications



- Pixel - 12.3 MP
- Sensor Resolution - 4056 x 3040 pixels
- Aperture - F2.8
- Lens - 3.6 mm
- Image Sensor Format - 1/2.3"
- Video - 4K, 1080P (Jetson Powered)
- In Built Memory - 60 GB
- Dimensions- 124 mm x 382 mm
- Input Voltage - 12 V DC
- Battery - Li-Ion, 14.8V, 20000 mAh
- Material - SS316 and Glass
- Rated Depth - 2000 m
- FOV- 90 Deg
- Weight - 25 Kg
- Recording Software - Deep Cam V2.0 (Windows)

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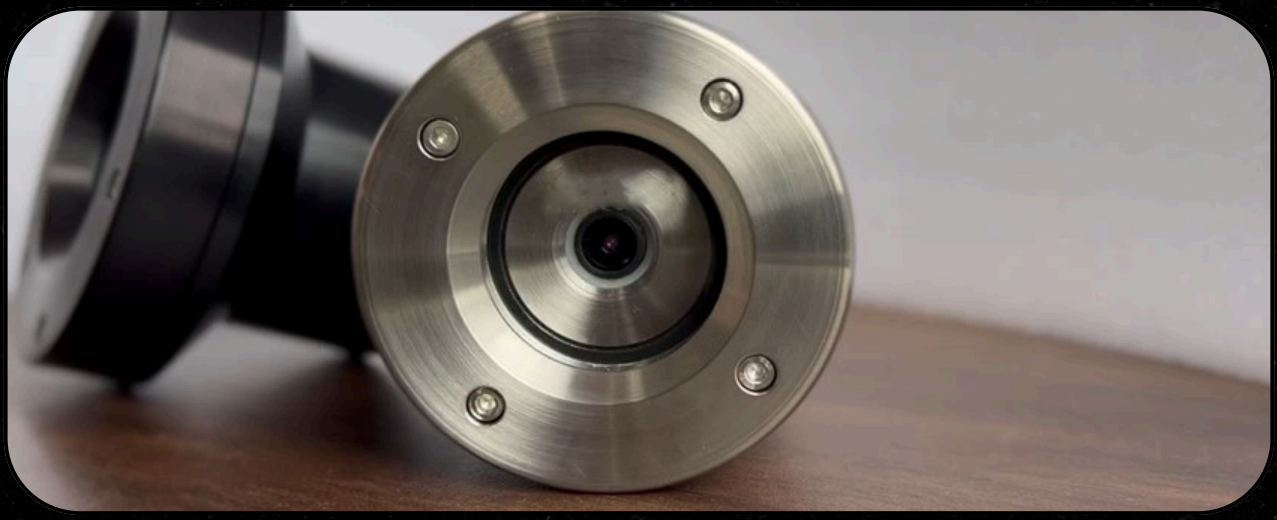
Underwater Camera - C2010



Specifications

- Pixel - 2MP, 1080P, 25-30fps
- Lens - 3.6 mm
- Dimensions- 85(Dia) x 100 mm
- Input Voltage - 12 V DC POE
- Material - SS316 and Glass/Acrylic
- Rated Depth - 100 m
- FOV- 90 Deg
- Cable - Cat6 Under Water Cable
- Connectivity- Ethernet, RTSP/FTP/SFTP/HTTP/HTTPS
- Power Input - UPS powered
- Recording - PC Software/ NVR

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Borewell Camera

Specifications

- Pixel - 1500TVL/ 2MP, 1080P, 25-30fps
- Dimensions- 2 inch/3inch (Dia)
- Camera length - 3 /6 inches
- Display Size - 7 /15.6 inch
- Material Housing- SS- 304
- Waterproofing - IP68
- Weight- 200 /600gm
- LED's - 8 (With intensity control)
- Battery - 12V
- Winch Frame - 100Mtr (Aero space grade)
- Cable - Co-axial /CAT6
- Working hours- 4-5hrs
- Cable Length- Coax-300 m/CAT6-85 m
- GCS - Epicase with 7" display No hard Disk / 15" dispaly and 1TB Hardisk

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