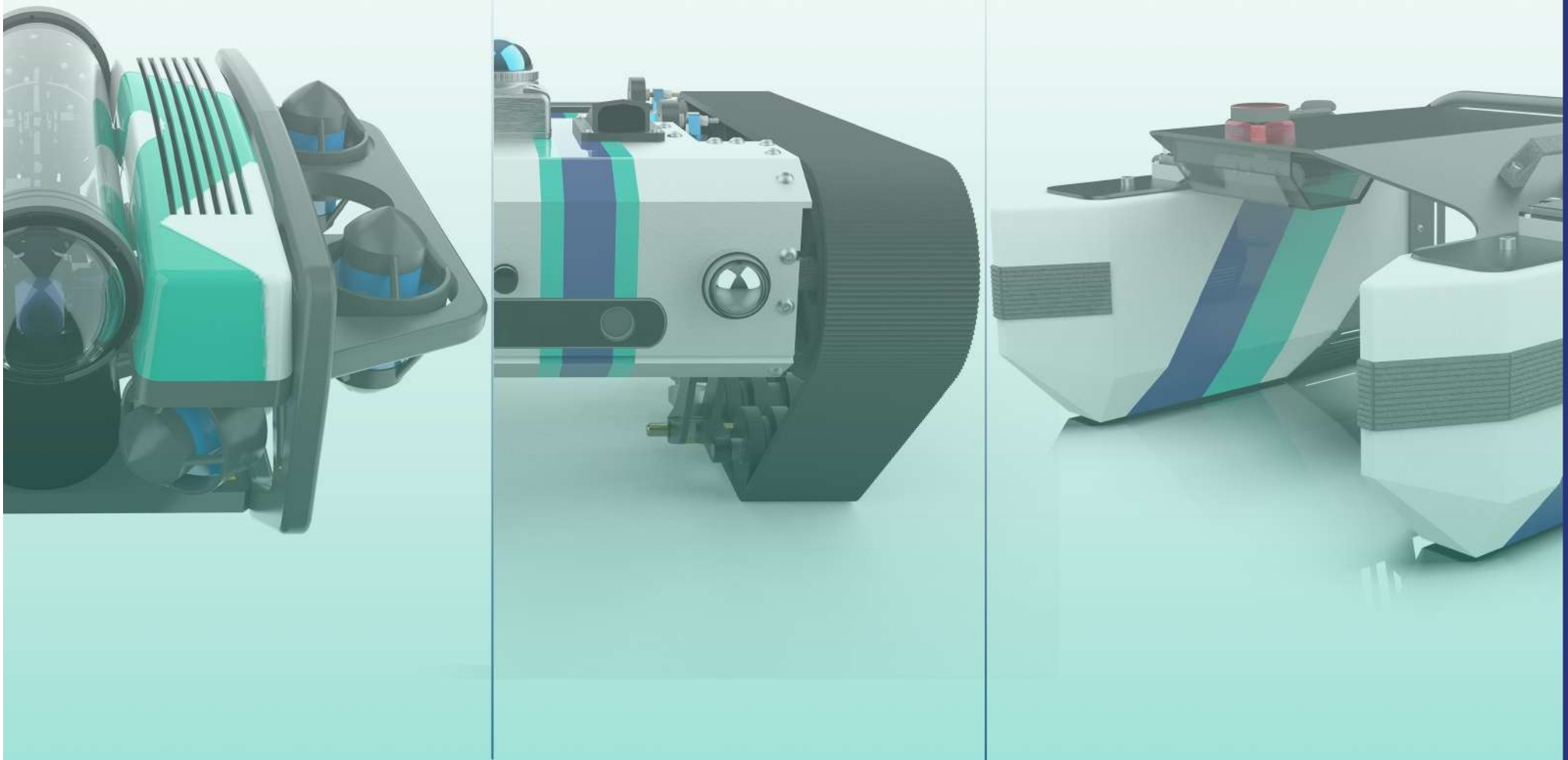
POTENTIAL
ROBOTIC SOLUTIONS

Solving for the Future



PRODUCT CATALOG

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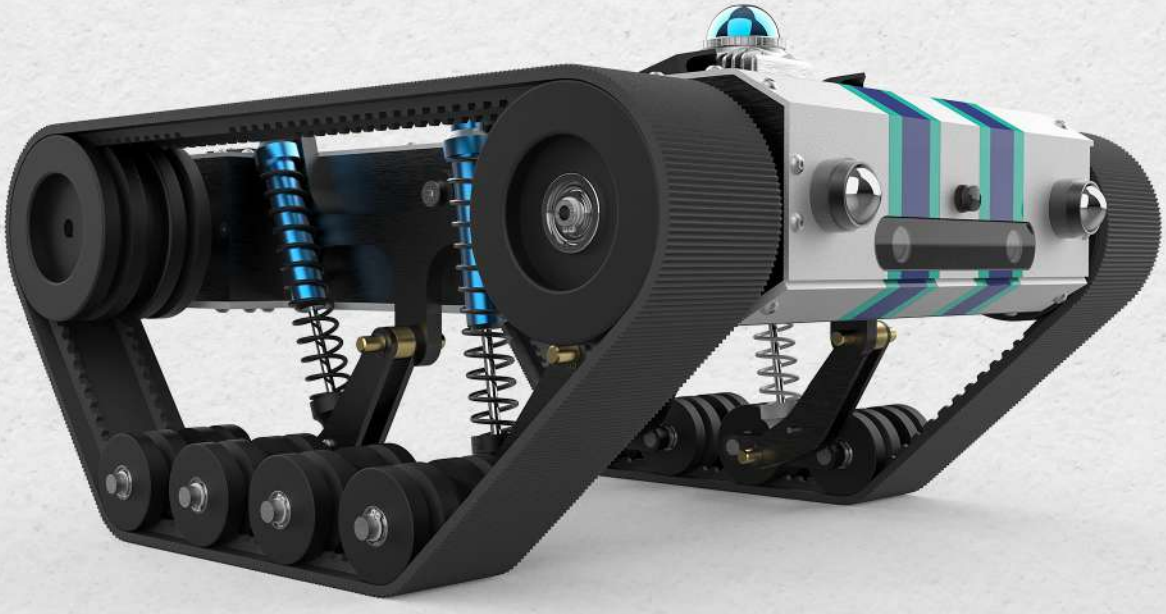
# UGV

## An Industrial Unmanned Ground Vehicle Product

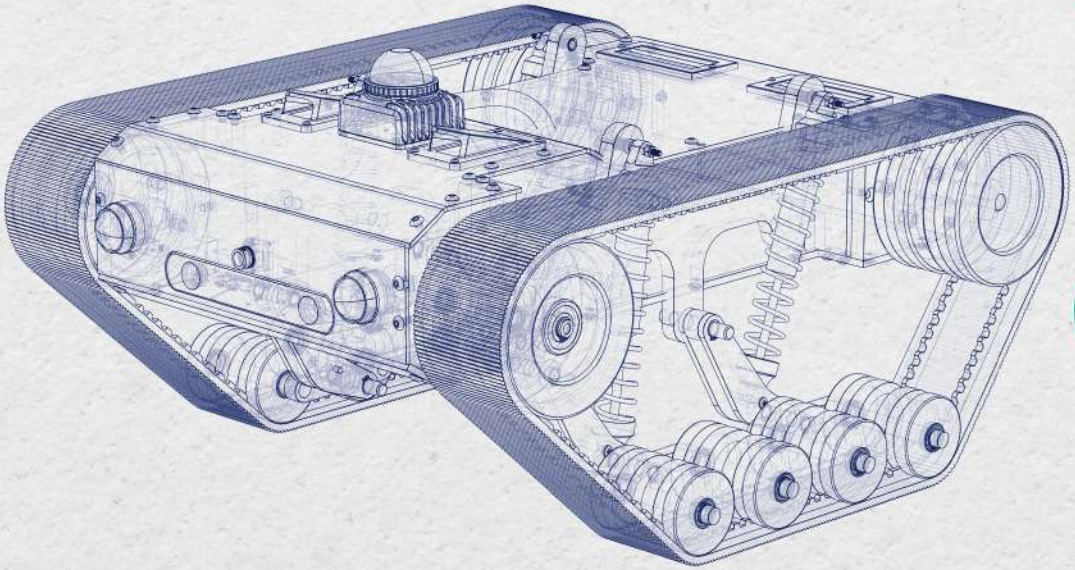


# UGV

A cutting-edge Unmanned Ground Vehicle (UGV) boasts an impressive array of advanced features, making it a formidable and adaptable tool. Equipped with the ability to traverse different terrains, the UGV can be teleoperated or used autonomously via pre-planned paths and configured with wheels or tracks for the relevant operational needs.

Furthermore, UGVs utilize 3D mapping capabilities to create detailed environmental representations, facilitating obstacle avoidance and navigation in complex terrain. Their autonomous navigation systems enable them to operate independently, while way-point navigation allows precise, pre-defined path-following, making them highly efficient in a variety of applications. These features collectively enhance the UGV's versatility, ensuring it can

# APPLICATIONS



## Search and Rescue:

- UGVs equipped with cameras, sensors, and thermal imaging can navigate disaster-stricken areas, such as collapsed buildings or natural disaster sites, to locate survivors.
- They can access confined spaces that might be dangerous for humanresponders.
- Provide Logistic Support and assist in First Aid Delivery

## Surveillance:

- UGVs (Unmanned Ground Vehicles) provide remote, discreet, and continuous surveillance with real-time video feeds, equipped with various sensors for versatile monitoring.
- They offer autonomous capabilities, multi-terrain operation, and cost-effectiveness, reducing human risk in dangerous or challenging surveillance environments.
- UGVs can be deployed for various applications, including security, disaster response, and border monitoring, making them valuable tools in surveillance and reconnaissance.

## Mapping and Documentation:

- UGVs can create 3D maps of the disaster area, documenting the extent of damage and providing invaluable information for decision-making and resource allocation.
- Certainly, the UGV is equipped with state-of-the-art technology, featuring 360 LiDAR and depth sensing technology which helps the robot in mapping as well as autonomously navigating through any environment.

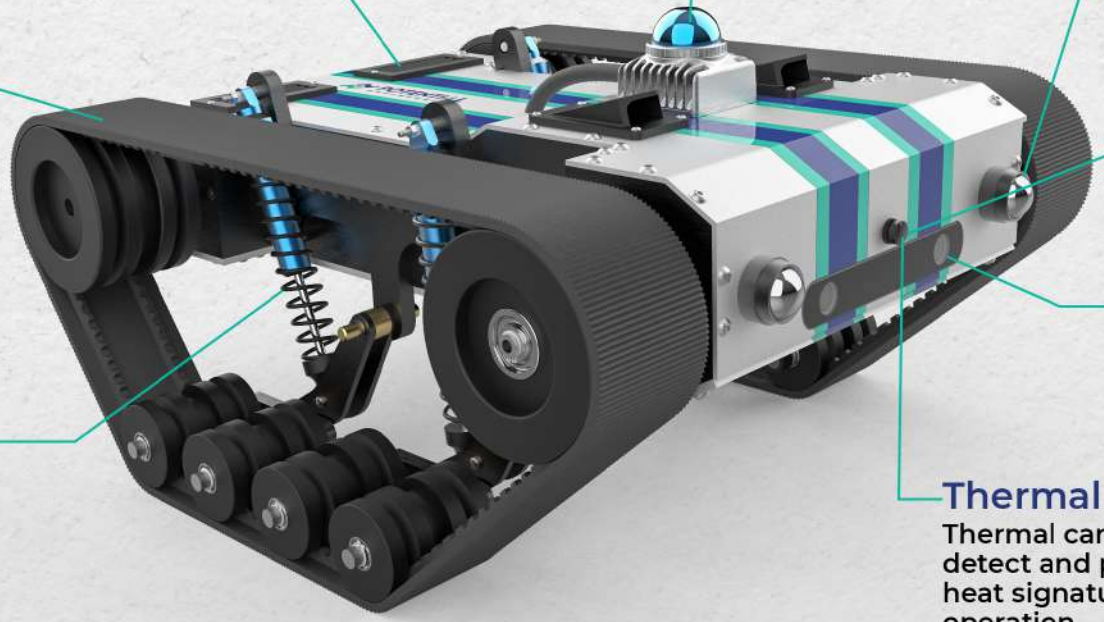
# OUR SOLUTION

### 3D Lidar
3D LiDAR enhances UGV Autonomous navigation, mapping, and obstacle detection accuracy.

### Air Vent
Facilitates Air Flow to keep the components from overheating

### Lights
Increases Visibility during low-light conditions

### Track Belt
Track belts provide traction, stability, and maneuverability on any terrain



### FPV Camera
Acquires live, real-time visual data feed.

### Depth Sensor
The depth camera enhances UGV accuracy in recognizing obstacles, mapping, person detection, and gesture recognition.

### Suspension System
Suspension ensures UGV stability, enhances off-road performance, and minimizes shock impact.

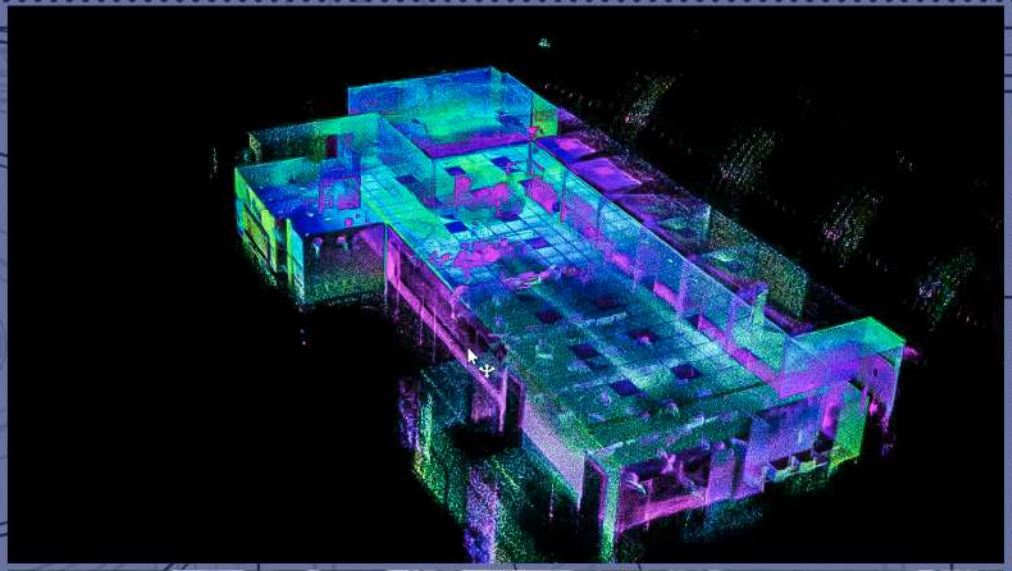
### Thermal Camera
Thermal cameras on UGVs detect and pinpoint human heat signatures during operation

## Specifications:

- Dimensions : 570mm x 550mm x 260mm
- Weight : 35 kg
- Materials : Aluminium Al 5052 & Al 6061, Natural Rubber & Nylon
- Payload Capacity : 100 kgs
- Speed: 35kmph
- Connectivity : Wireless/RC

## Control System:

- Teleoperation
- Swarming in Development
- Follow Me
- Waypoint Navigation
- Autonomous Navigation



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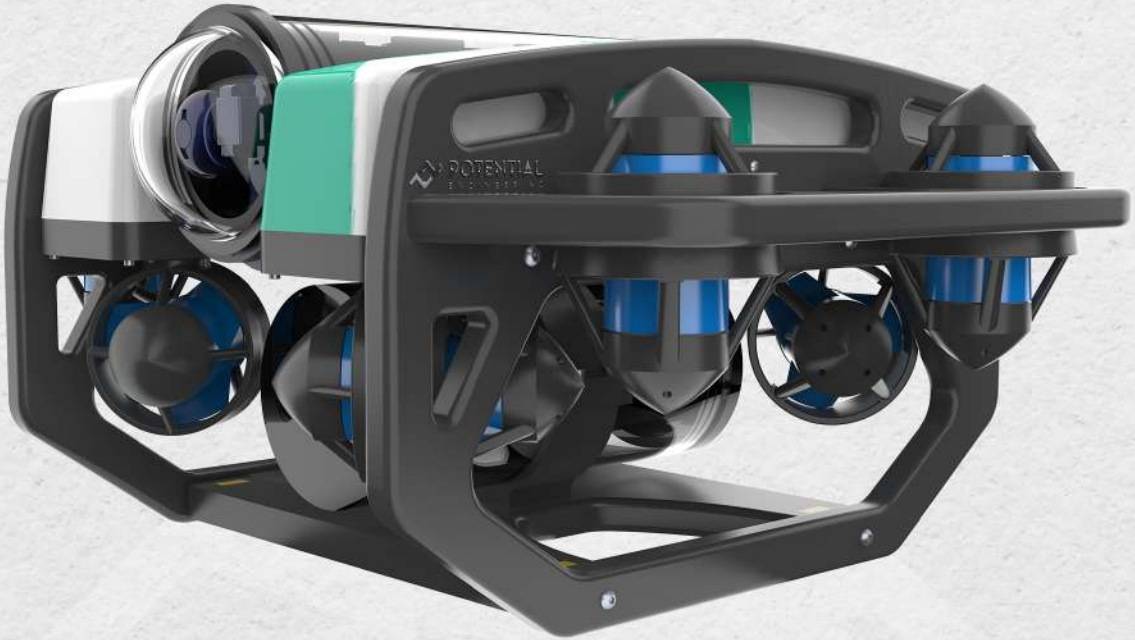
# ROV

An Under Water ROV Product

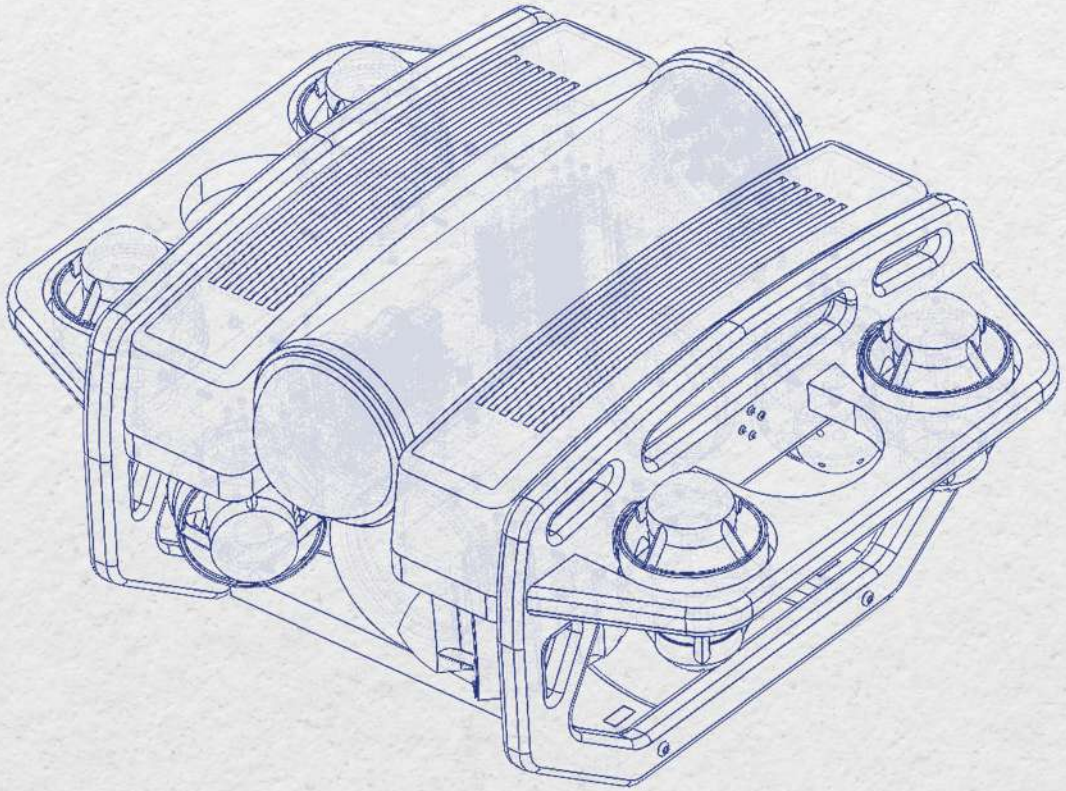


# ROV

The ROV, a remarkable underwater robot, plays a vital role in natural calamities, hazardous areas, and rescue operations. With its advanced navigation, it deftly maneuvers through challenging waters, locating and rescuing survivors in submerged environments.

Additionally, its detailed inspections help assess damage to underwater structures, facilitating prompt repairs. In disaster response, environmental conservation, and ensuring safety, the ROV is an essential asset, providing invaluable assistance in critical situations. Its multifunctional features make it an indispensable tool for navigating underwater environments and carrying out complex rescue and recovery missions.

# APPLICATIONS



## Rescue Operations

ROV is instrumental in search and rescue missions. They effectively locate and recover survivors in challenging underwater environments, such as shipwrecks and natural disasters, improving the safety and efficiency of rescue operations.

## Subsea Inspection and Maintenance

ROVs are vital for inspecting and maintaining subsea infrastructure in the offshore oil and gas industry.They perform tasks such as pipeline inspections, subsea equipment maintenance, and structural assessments, reducing operational costs and enhancing safety.

## Surveillance

ROVs equipped with sensors and cameras are used for environmental surveillance, helping to assess water quality, marine biodiversity, and the impact of human activities on aquatic ecosystems

# OUR SOLUTION

**Position Adjust Mode**
Equipped with an altitude sensor for holding position under water

**Tether**
Data Transmission Tether (100m)

**Electronics Container**
Fully Water Proof Container with components for processing and control

**FOAM Buoys**
Helps in Buoyancy Stabilization

**Onboard Camera**
Low Light High-Definition Camera

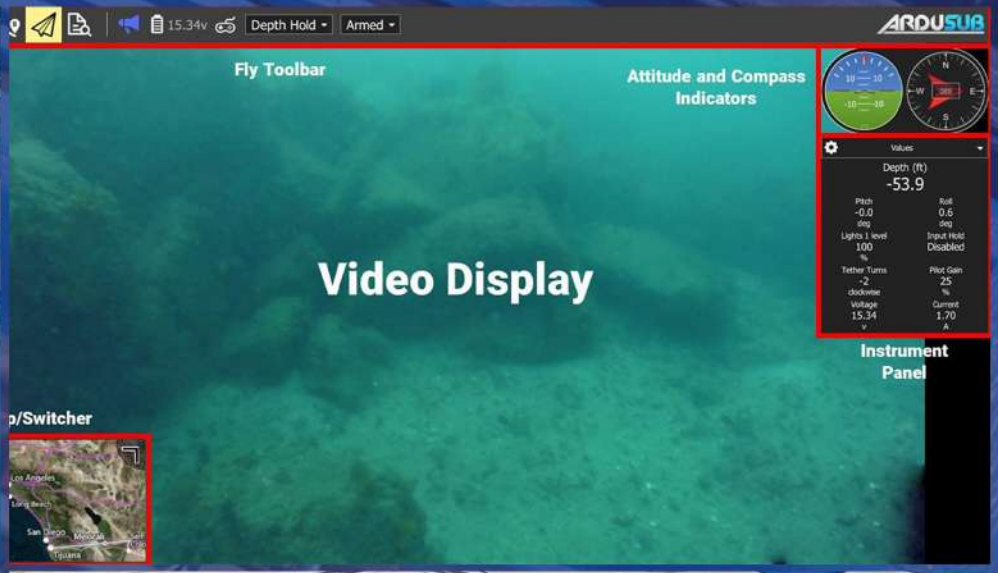
**Thrusters**
5KG Thrust Per Motor

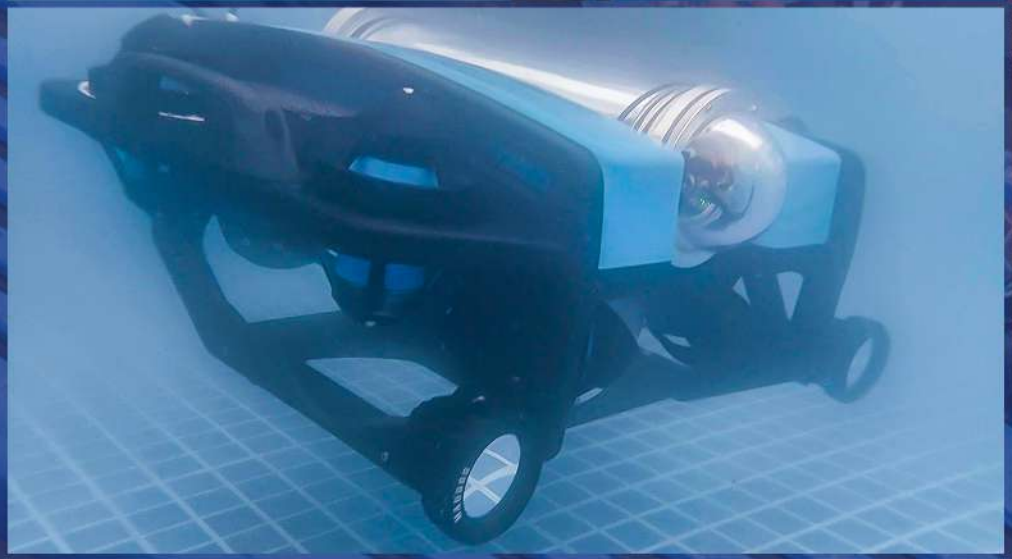
## Specifications:

- Dimensions : 700mm x 600mm x 400mm
- Weight : 23.5kg
- Materials : UHMWPE, Acrylic, al 5052, Brass, PETG
- Speed : 4.8 kmph (2.6 knots)
- Connectivity : Tether

## Control System:

- Teleoperation
- Swarming in Development
- Waypoint Navigation
- Position Hold


15.34v
Depth Hold
Armed
ARDUSUB
Fly Toolbar
Attitude and Compass Indicators
Values
Depth (ft)
-53.9
Pitch
-0.0
deg
Roll
0.6
deg
Lights 1 level
100
%
Input Hold
Disabled
Tether Turns
-2
clockwise
Pilot Gain
25
%
Voltage
15.34
v
Current
1.70
A
Video Display
Instrument Panel
p/Switcher



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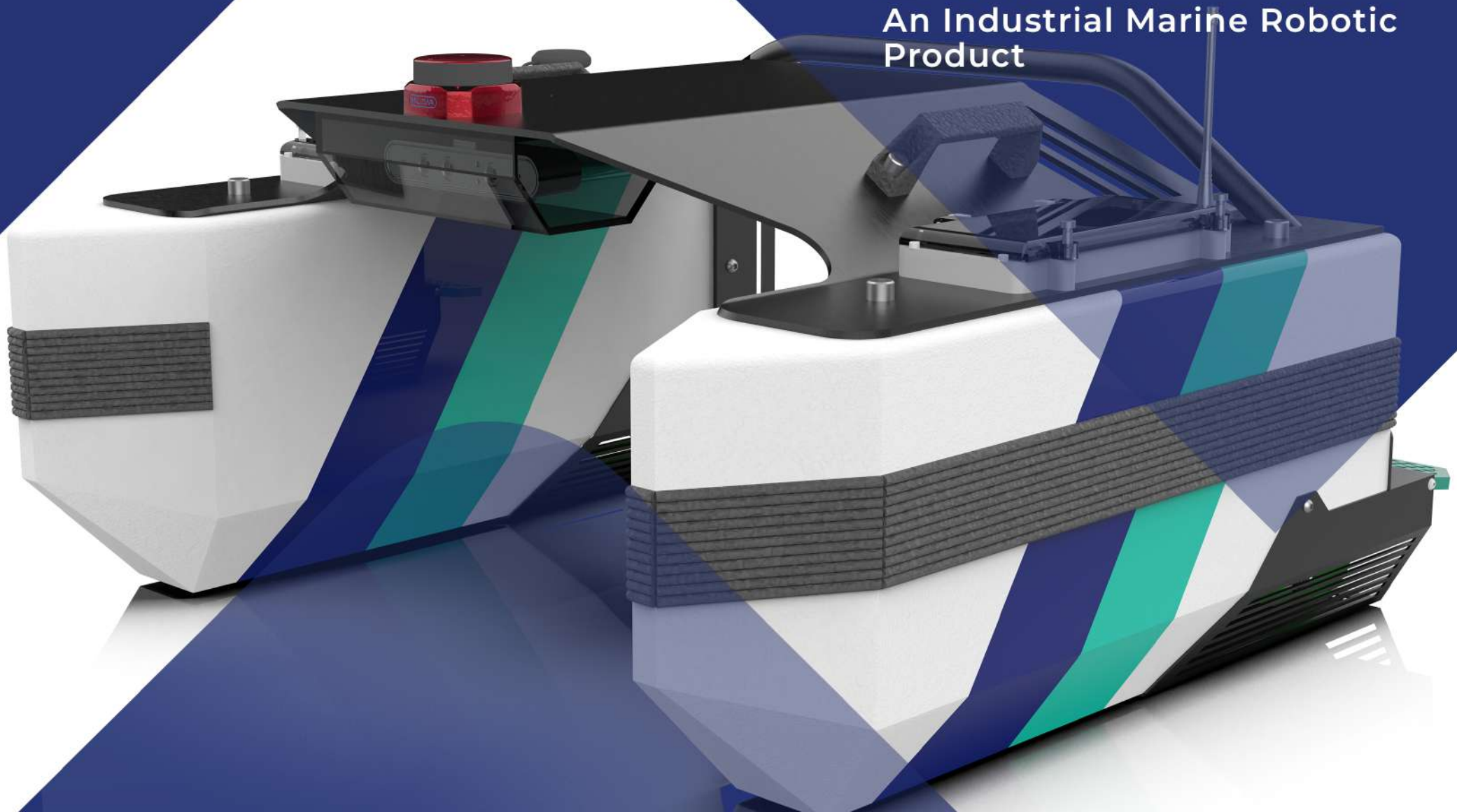
# FLOATING BOT

## An Industrial Marine Robotic Product

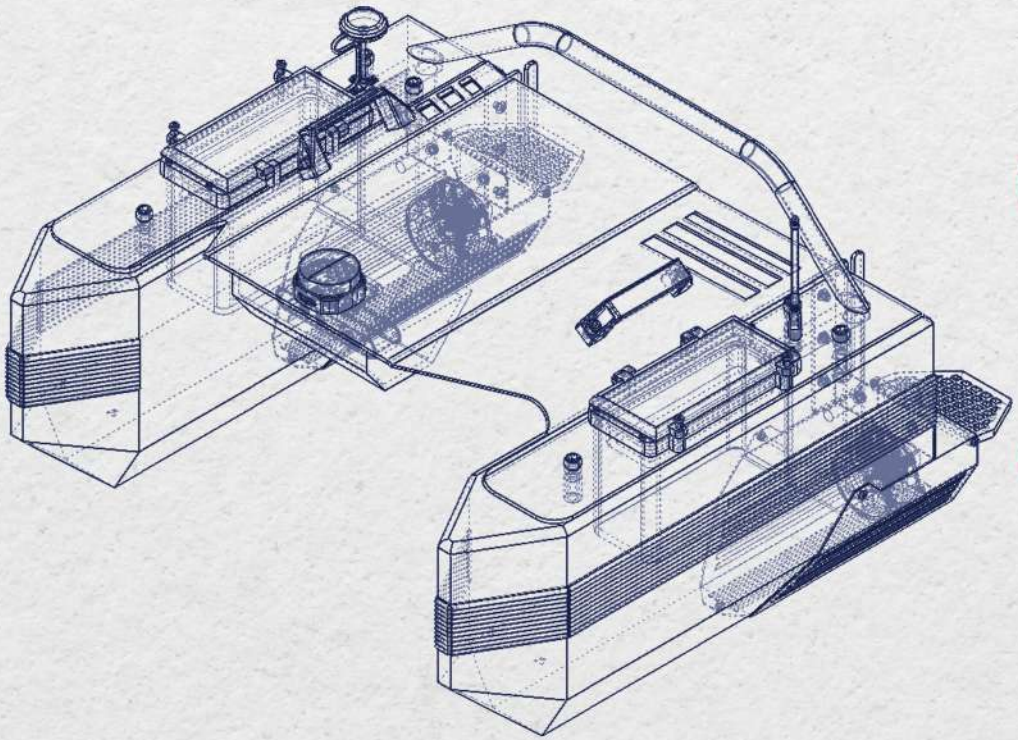


# FLOATING BOT

Introducing "Floating Bot," a remarkable aquatic robot designed for both autonomous and manual control, with a myriad of practical applications. In crisis situations on water, FloatingBot serves as a reliable first responder,capable of swift, autonomous navigation for effective rescue missions during disasters. Its autonomous mode ensures quick response times, while manual control enables precise, delicate operations for safer rescues.

Floating Bot doesn't stop at disaster response; it's a dedicated guardian of our waterways. Equipped to efficiently collect pollutants such as oil, diesel, and plastic,it plays a vital role in preserving our fragile ecosystems. Moreover, its adaptability extends to the realm of research, making it a valuable tool for ocean exploration and environmental studies. With its name, Floating Bot embodies innovation in aquatic problem-solving, promising to revolutionize water-based operations.

# APPLICATIONS



## Water-Based Rescue Operations:

- Swift response to water-related emergencies.
- It possesses the capability to provide guidance to individuals who may be trapped in any body of water, directing them to the closest safety point.
- Precision in delicate and complex rescue operations.

## Pollutant Collection:

- Efficiently collects and removes pollutants from water surfaces.
- Targeted removal of substances like oil, diesel, and plastic.

## Surveillance and Inspection:

- Floating bots provide real-time data and video feeds to operators, ensuring quick responses to any detected anomalies or security breaches
- They are equipped with various sensors, including cameras, sonar, and environmental detectors, enabling them to gather data on aquatic ecosystems, water quality, and potential security threats.

## Bathymetry:

- Floating bots equipped with specialised sensors and sonar technology can precisely measure and map the depths of water bodies.
- Ability to reach these areas makes them valuable for mapping regions that are difficult for traditional survey methods to reach.

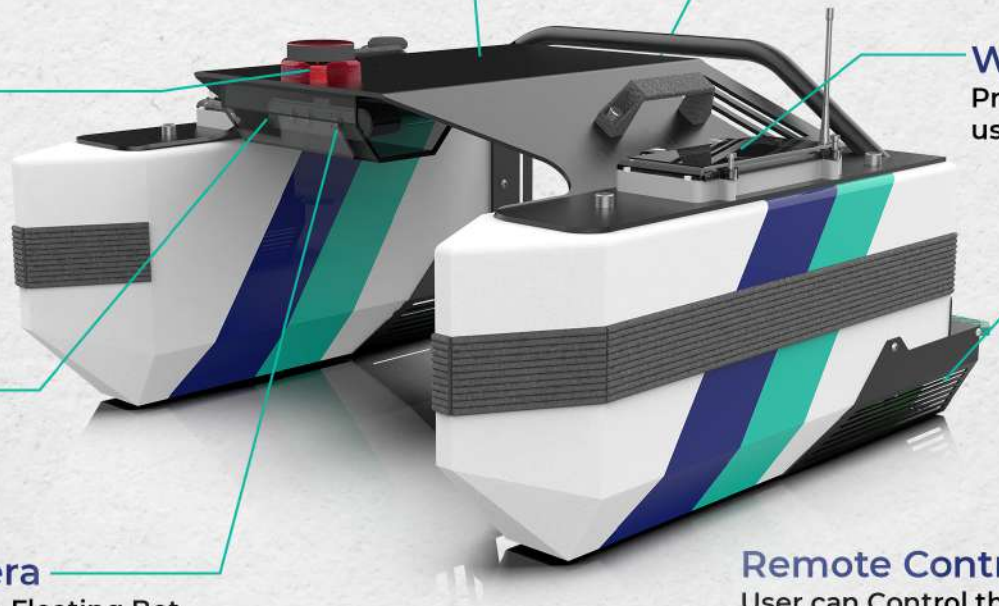
# OUR SOLUTION

### Aluminum Body
Strong Aluminium Body for Structural Protection

### Handle
Easy Grip Handles for manual maneuverability

### 2D Lidar
Obstacle Detection and Distance Measurement

### Water Proof Enclosure
Protects the electronic components used for Processing and Control



### Thrusters
6KG Thrust Per Thruster

### Onboard Camera
Debris Detection
Detect Person in Danger

### Thermal Camera
Thermal cameras on Floating Bot detect and pinpoint human heat signatures during operation

### Remote Control Device
User can Control the system as well as recieve real time data from the Floating Bot

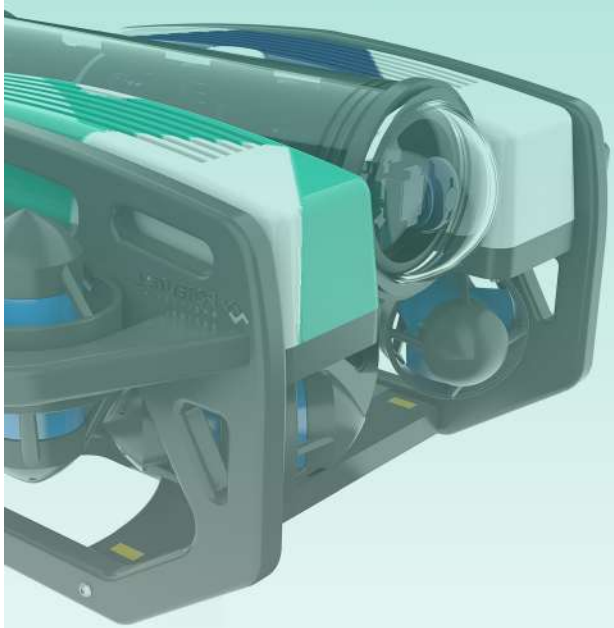
## Specifications:

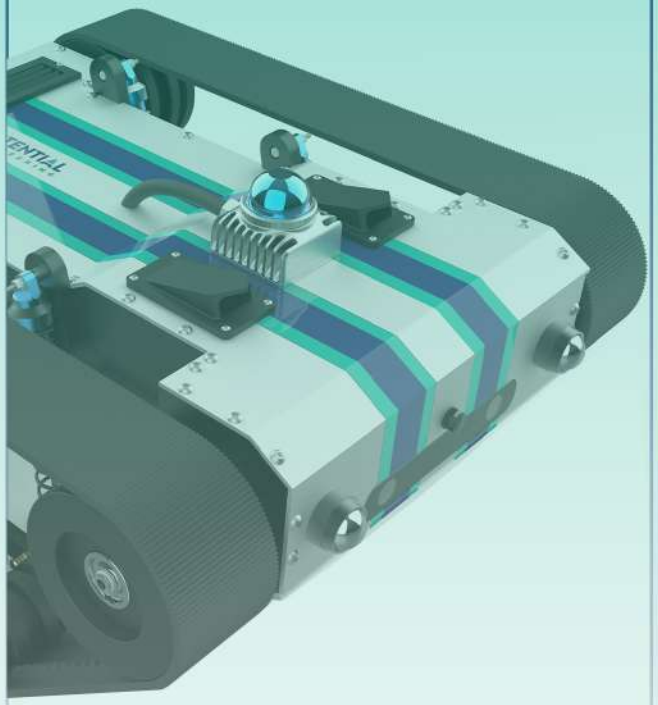
- Dimensions : 800mm x 600mm x 500mm
- Weight : 31.58kg
- Payload capacity : 10kg
- Materials : FRP, Al 5052, UHMWPE
- Speed : 9.7 KMPH (18knots)
- Connectivity : Wireless / RC

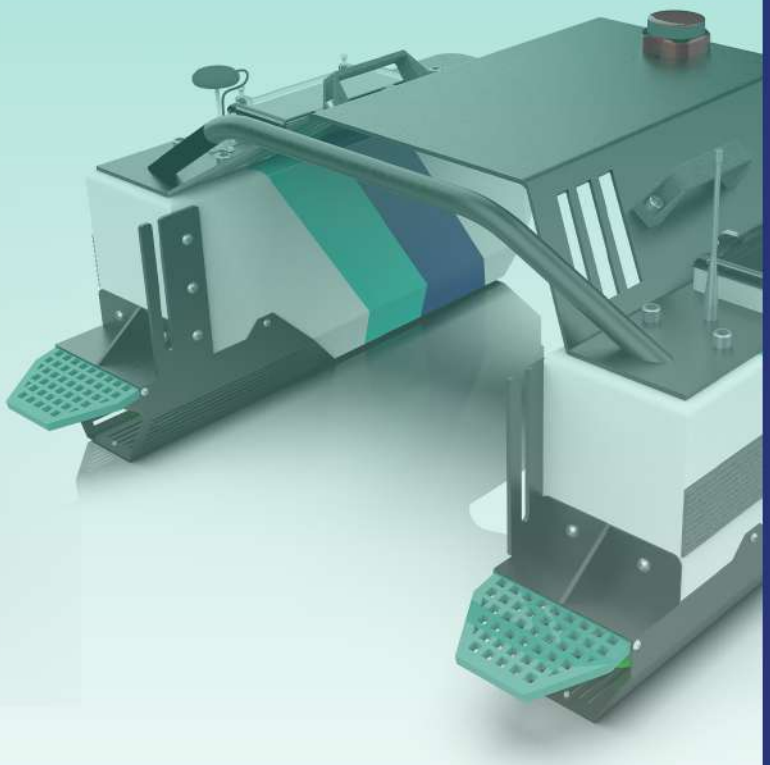
## Control System:

- Teleoperation
- Swarming in Development
- Waypoint Navigation
- Autonomous Navigation


COMMUNICATION LOST
Disconnect
Fly
Land
RTL
Pause
Values
Alt (Rel) (m)
45.3
Ground Speed (m/s)
0.2
Flight Time
00:44:58
Air Speed (m/s)
0.1
Voltage (v)
23.53
Current (A)
0.03
Climb Rate
0.0
Distance to Home
6.7
Wind Direction
deg
Wind Spd
m/s
Wind Spd (vert)
m/s







## CONTACT US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