3D RESEARCH
MARINE ROBOTICS

your exploring companion



Underwater Vision

Unmanned Vehicles

Enviromental monitoring

Catalog 2026

3D Research – Marine Robotics is a division dedicated to the development of advanced technologies for the exploration and monitoring of the marine environment.

Our vision systems integrate high-resolution optics, custom lighting, and innovative coaxial laser-camera alignments to capture precise metric data and true-to-life color visuals even in turbid or low-light marine environments. Designed for flexible deployment, these modular optical payloads provide essential spatial awareness, automated feature scaling, and dynamic targeting for ROV and AUV operations.

Complementing our hardware, our advanced software pipeline processes optical streams into real-time 3D reconstructions, high-density point clouds, and immersive Digital Twins, enabling accurate sub-millimetric measurements and detailed structural diagnostics.

By combining precision optical engineering with intelligent image processing, 3D Research turns underwater visual data into actionable spatial intelligence for marine research, subsea asset inspection, and submerged cultural heritage documentation.

UNDERWATER **VISION**



BLUEDEPTH3D
Multi-Camera Georeferenced Imaging System

P.4



SEASCALER
Underwater Laser Scaler for ROV

P.4



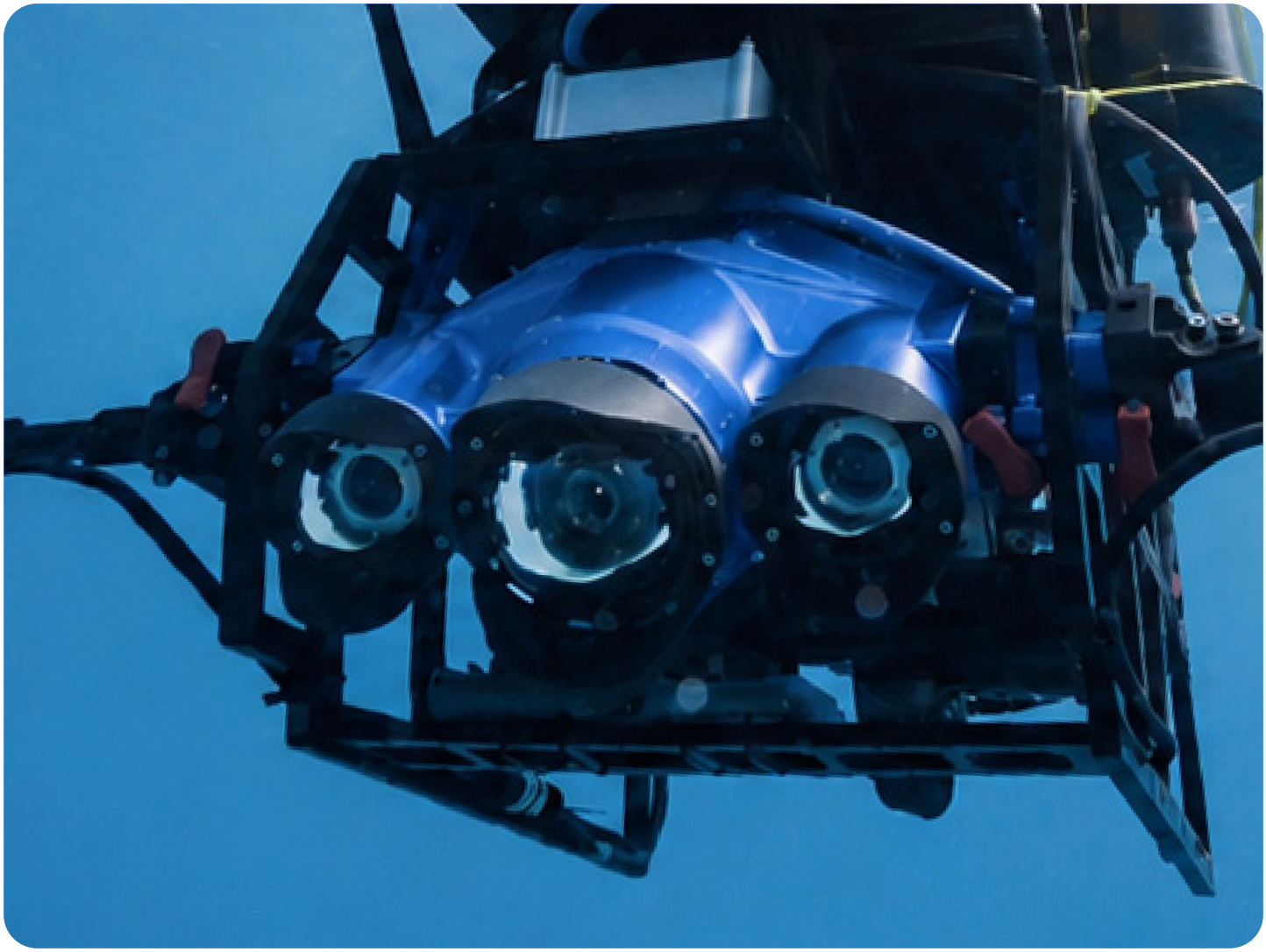
UCAMERA S
Compact underwater camera

P.4

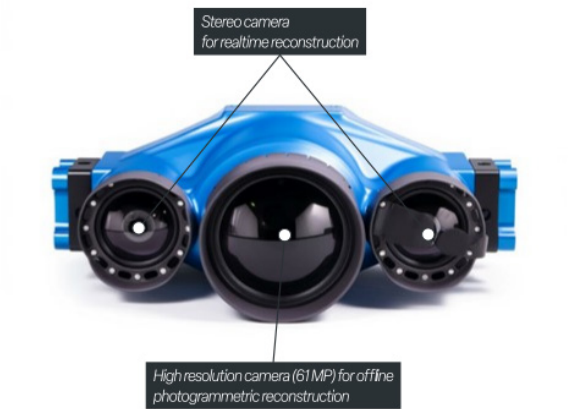
BLUEDEPTH3D

Multi-Camera Georeferenced Imaging System

BlueDepth3D is a compact underwater multi-camera imaging system integrating stereo and mono optical sensors for precise georeferenced data acquisition. **Designed for scientific surveys and inspections**, it captures RAW imagery optimized for photogrammetry and analytical workflows.

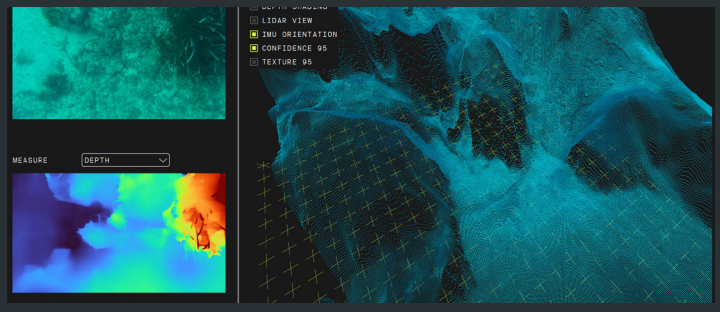


Description



High-precision **stereo imaging**. The stereo camera configuration enables accurate spatial measurements and depth perception for **advanced 3D reconstruction workflows**.
RAW image acquisition ensures maximum photogrammetric fidelity and preserves radiometric information required for scientific processing.
Modular system architecture allows **integration with acoustic positioning, navigation sensors, and external payloads**.
The compact mechanical design simplifies installation on ROVs or survey frames while maintaining optical stability underwater. The system supports long-duration missions and **high-quality visual documentation** for research, inspection, and industrial operations.

3D Point Cloud Visualization



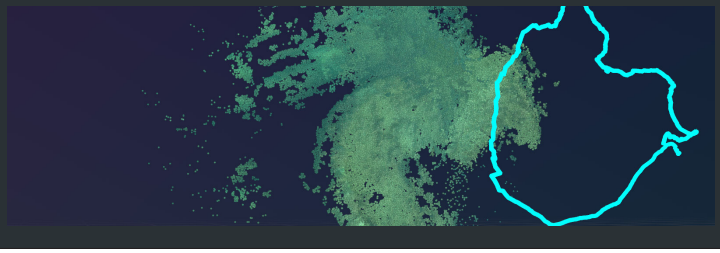
Transform complex underwater environments into highly accurate, dense 3D point clouds. The system's high-precision stereo configuration captures every intricate detail with maximum photogrammetric fidelity, allowing researchers and inspectors to visualize subsea structures and artifacts with unprecedented clarity and depth.



Georeferenced Reconstruction

Seamlessly bridge the gap between raw imagery and precise geographical data. By integrating modular navigation and acoustic positioning sensors, the system ensures every high-resolution RAW image is perfectly georeferenced, enabling the creation of flawlessly mapped, true-to-scale 3D reconstructions for advanced spatial analysis.

Real-Time SLAM

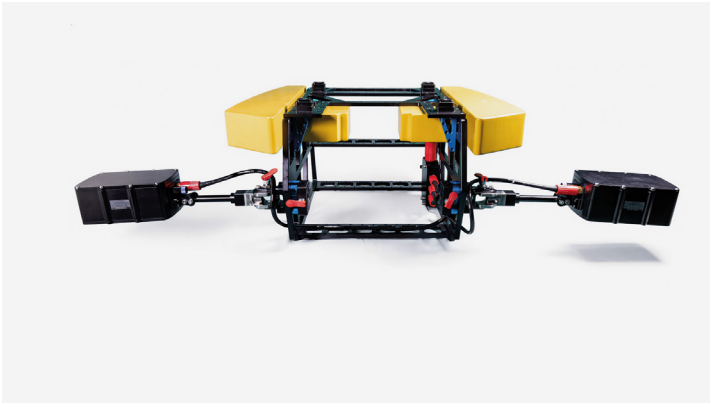


Navigate and map uncharted underwater territories simultaneously with cutting-edge SLAM capabilities. Leveraging synchronized multi-camera optical sensors, the system provides immediate spatial awareness and real-time tracking, empowering ROVs and AUVs to conduct smarter, safer, and more efficient autonomous missions.

Technical Data

MODELS	B3D	B3D1000
DIMENSIONS (W X H X D)	300 mm X 242 mm X 148 mm	300 mm x 252 mm x 148 mm
WEIGHT (AIR/WATER)	5.9 KG / 0.5 kg	8.4 KG / 2.2 KG
HOUSING MATERIAL	ANODIZED ALUMINIUM	
RGB CAMERA SENSOR	35 MM FULL FRAME EXMOR R CMOS SENSOR 61 MP 24 mm FOCAL LENGTH FOV 84°	
STEREO CAMERA	SENSORS DUAL 8 MP ROLLING SHUTTER UP TO 4K @ 15 FPS 220 MM BASELINE FOV 110°(H) x 80°(V) x 120°(D)	
RESOLUTION	RBG: 9504 x 6336 px STEREO: 2x 1920 x 1200 px	
PROCESSING UNIT	NVIDIA® JETSON ORIN NX RAM 8 GB	
MODE	Video / Photo	
IMAGES FORMAT	JPEG (georeferenced + raw)	
VIDEO FORMAT	UP TO 4K AT 60fps (8 bit) AND 4K at 50fps (10-bit)	
INTERFACES	ETHERNET, POWER, EXTERNAL TRIGGER (SUBCONN MCBH7F)	
POWER	30 W, 24 V DC	
DEPTH RANGE	0.4 m - 20 m	
API & SDK	HTTP RestFull API	

Optional Accessories - Modular Pro Extension



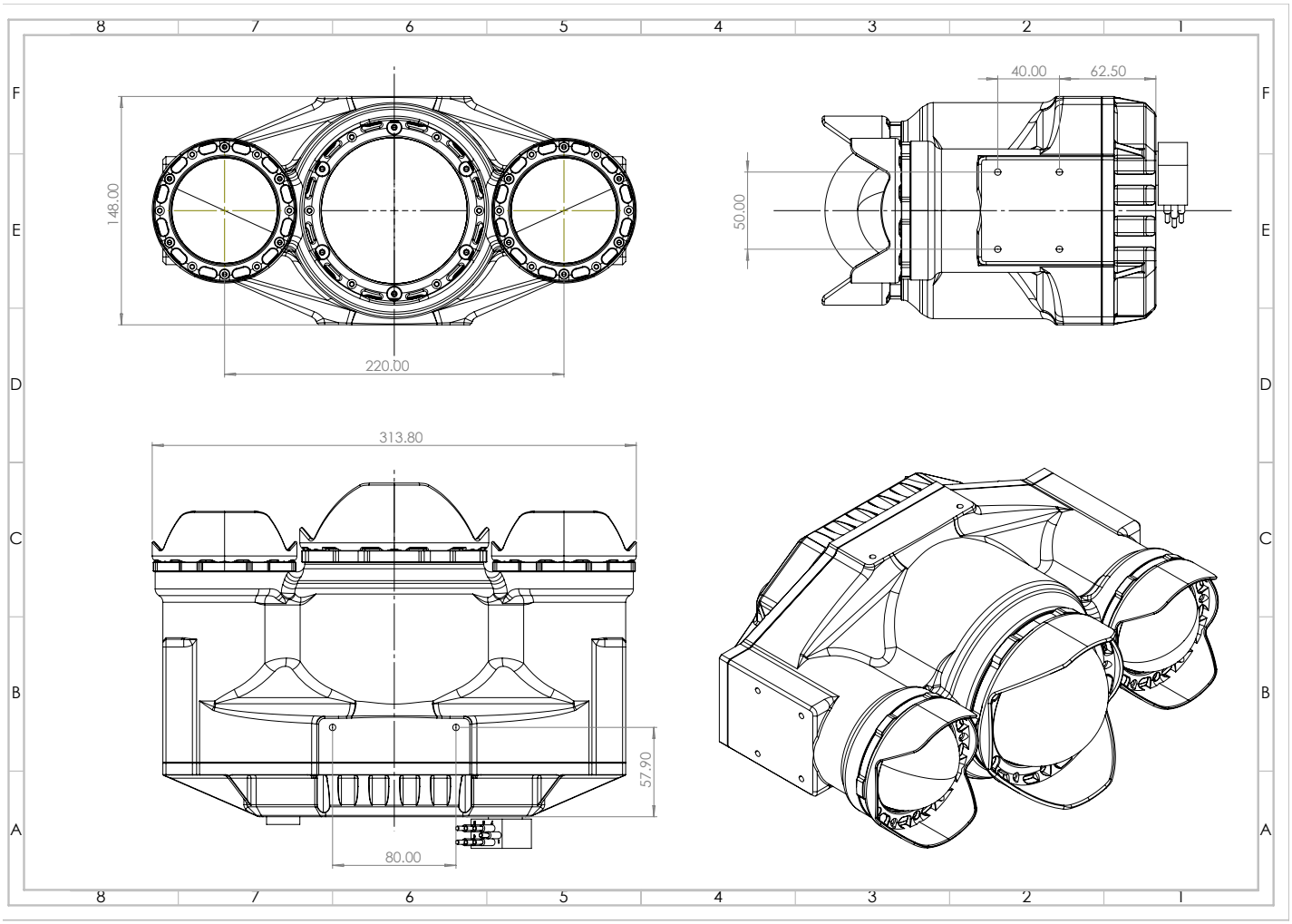
MPE is a modular expansion skid designed to extend the capabilities of ROV platforms by providing additional mounting points, power distribution and networking infrastructure. MPE enables rapid integration of additional sensors and tools on inspection-class ROVs. The modular architecture allows operators to reconfigure payload layouts depending on mission objectives (optical, acoustic, environmental), reducing integration time and avoiding platform redesign.

High-power illumination

The integrated 80,000 lm continuous lighting and 250,000 lm strobe support high-quality imaging in low-visibility environments. Suitable for photogrammetry, visual inspection, and video documentation, ensuring uniform illumination and reducing motion blur in dynamic conditions.



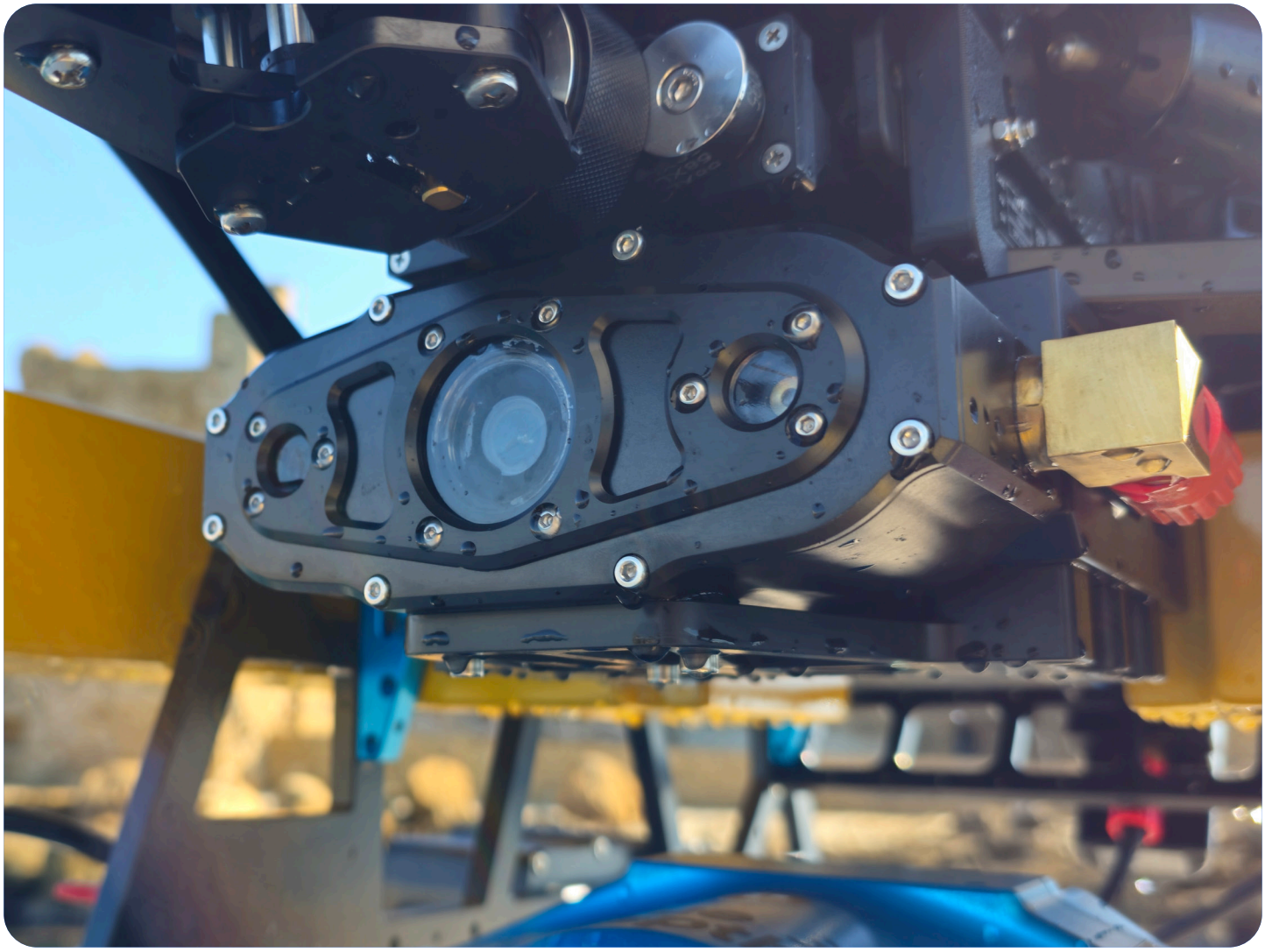
Drawing



SEASCALER

Underwater Laser Scaler for ROV

SeaSCALER is a laser scaling system designed to perform rapid dimensional measurements underwater. Two parallel green laser beams project reference points on targets, enabling accurate size estimation directly from video imagery.



Description



High-precision visual inspection and metric scaling system engineered for ROV integration down to operating depths of 300 m. Constructed with a ruggedized anodized aluminum housing, the unit integrates a FullHD RGB camera sensor (1080p@30 fps) with a wide FOV (110°) and a calibrated green laser reference system (520 nm) featuring a 100 mm baseline for accurate target sizing and subsea measurement. Plug-and-play connectivity is provided via a SubConn MCBH8F wet-mateable connector handling Ethernet data streaming, 12 V DC power supply, and external triggering capabilities.

10 cm baseline laser with Video integration

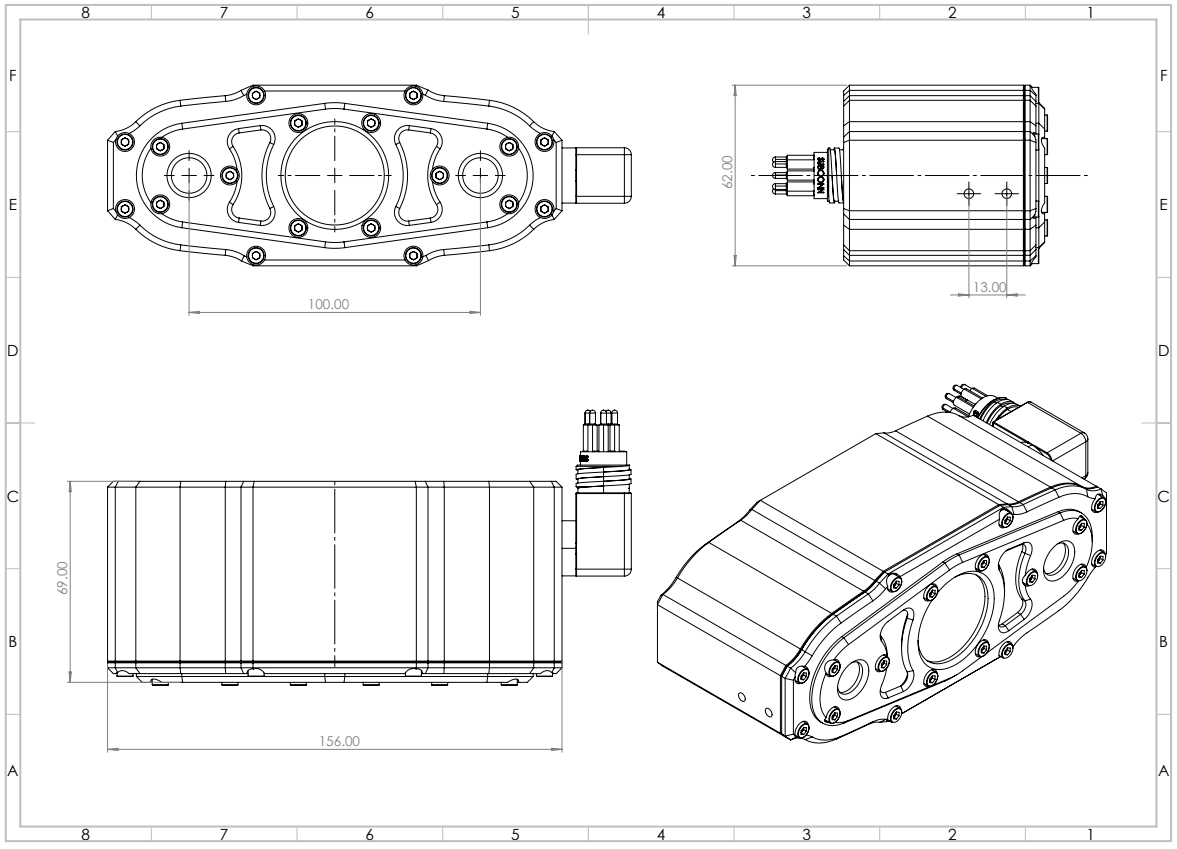


The key innovation of the system lies in its coaxial architecture: the FullHD camera is centrally positioned between two calibrated laser modules set at a 100 mm (10 cm) baseline. This symmetrical configuration seamlessly integrates the video stream with green laser references (520 nm), projecting scale markers directly along the primary optical axis. This eliminates parallax errors common in off-axis setups, enabling operators to perform real-time precision scaling and target measurements without requiring complex post-processing.

Technical Data

MODELS	LSS	LSS1000
DIMENSIONS (W X H X D)	70 mm x 156 mm x 60 mm	
WEIGHT (AIR/WATER)	5.9 KG / 0.5 kg	8.4 KG / 2.2 KG
HOUSING MATERIAL	ANODIZED ALUMINIUM	TITANIUM
RGB CAMERA SENSOR	VIDEO FULLHD 1080p@30fps FOV 110°	
LASER	520 nm (green) WAVELENGTH 100 mm BASELINE	
INTERFACES	ETHERNET, POWER (SUBCONN MCBH8M)	
POWER	24 W, 12 V DC	
MAXIMUM OPERATING DEPTH	300 m	1000m

Drawing



UCAMERA S

Compact underwater camera

An ultra-compact underwater camera designed to deliver high-definition Full HD video and real-time streaming. Its reduced form factor and minimal weight in water make it the ideal solution for integration on robotic vehicles (ROVs, AUVs, and ASVs). Capable of operating at depths of up to 1,000 meters thanks to its robust anodized aluminum or titanium housing, it features a wide 110° field of view for visual inspections, archaeological documentation, and environmental monitoring with minimal impact on payload capacity.

Technical Data

MODELS	UCS	UCS1000
DIMENSIONS (D x L)		80 mm x 160 mm
WEIGHT (AIR/WATER)	492 g / 122 g	854 g / 472 g
MATERIALS	Anodized aluminum	Titanium
RGB CAMERA SENSOR	video FullHD 1080p@30 fps, FOV 110°	
INTERFACES	Ethernet, Power, External (SubConn MCBH6M)	
POWER SUPPLY	12 V DC, max 2 A	
DEPTH RATING	300 m	1000 m



Applications

Underwater archaeology — high-resolution 3D documentation of submerged sites and artifacts.
Industrial inspection — detailed visual surveys of infrastructure, pipelines, and subsea assets.
Environmental monitoring — habitat mapping and ecological observation missions.
Robotic platforms — imaging payload for ROVs, AUVs and surface vehicles.

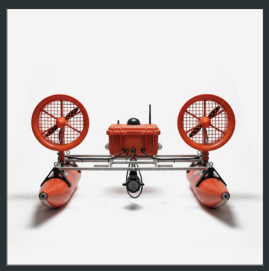
3D Research – Marine Robotics is a division dedicated to the development of advanced technologies for the exploration and monitoring of the marine environment.

Our vehicle line-up—spanning ROVs, AUVs, and Autonomous Surface Vehicles (ASVs)—combines high-precision marine robotics with modular sensing suites, optical-acoustic payloads, and real-time 3D reconstruction systems. Engineered to operate seamlessly under DEVSS OS, these unmanned systems provide plug-and-play versatility for high-resolution seabed mapping, structural diagnostics, and complex ecosystem surveys.

To support mission-critical operations, every vehicle is backed by our proprietary software architecture, mission simulators, and Digital Twin frameworks—enabling accurate mission planning, hardware-in-the-loop training, and live telemetry control.

By bridging cutting-edge robotics with intelligent control software, 3D Research delivers field-ready unmanned solutions designed to access, observe, and quantify demanding subsea environments where direct human intervention is limited or impossible.

UNMANNED **VEHICLES**



DEVSS Air
Autonomous surface catamaran with aerial propulsion

P.4



DEVSS 2
Autonomous surface catamaran with submerged propulsion

P.4



SEAWASP
Unending autonomy, precision surface positioning

P.4

DEVSS Air

Autonomous surface catamaran with aerial propulsion

DEVSS Air is an autonomous surface catamaran equipped with an advanced navigation unit and modular payload bay, designed for environmental monitoring and hydrographic missions.

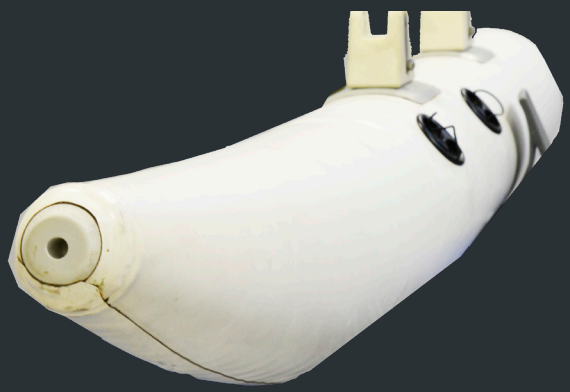


Description



Autonomous navigation allows the platform to follow pre-programmed missions or manual control via remote links.
The modular payload bay supports integration of optical and acoustic sensors. Aerial propulsion minimizes underwater disturbance, enabling operations in sensitive shallow environments. Real-time adaptive control ensures stable navigation and mission execution.

Inflatable Hulls



The shockproof inflatable neoprene hulls grant a maximum payload of 15 Kg. They can be quickly disassembled from the vehicle chassis for an easy transportation. Five different trim configurations can be selected for optimal navigation by changing the relative position between frame and hulls.

Auxiliary pole for sensors mounting

DEVSS AIR can be equipped with a retractable pole fixed to the stern of the vehicle by means of an axial hinge. It allows the deployment of the mounted sensors to a depth of approximately 40 cm.



Technical Data

Dimensions (W x H x D)	1450 x 730 x 1450 mm
Weight	10 Kg
Payload	15 kg
Materials	Inox steel, neoprene hulls
Propulsion	2x Aerial propellers
Speed	2 kn
Power	LiPo 4S
Autonomy	Up to 2 hours *
Remote Control	2.4 – 5 GHz
Interfaces	UART, I2C, SPI, CAN
Connectivity	WiFi
Navigation	MAVLink long-range telemetry @896 MHz, 9 DoF IMU

** Beaufort lv.2 – average payload*

Drawing

Optional Accessories



Single Beam Module

High-resolution hydrographic payload integrating a Norbit multibeam echosounder and a Trimble Applanix GNSS/INU positioning and attitude system for high-accuracy bathymetric data acquisition. The system features motorized mechatronic actuation for the automated deployment of the extended-geometry GNSS antennas and the lowering/retraction of the transducer pole. An integrated industrial Mini PC handles high-throughput local data storage and processing, interfacing natively with DEVSS OS for telemetry streaming, servomechanism control, and onboard diagnostics via the centralized control panel.

Photogrammetric Payload

UCamera is a versatile underwater imaging unit designed for spatially-aware documentation. When paired with an acoustic positioning pinger, the system produces images enriched with geospatial metadata for accurate geo-referenced visual surveys. Additionally, the unit seamlessly communicates with the DEVSS Air vehicle, streaming telemetry and image metadata for synchronized aerial-aquatic mission operations.



DEVSS2

Autonomous surface catamaran with submerged propulsion

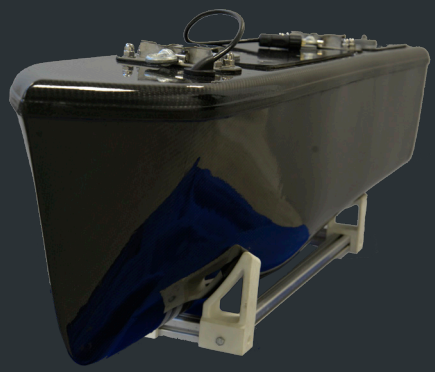
DEVSS2 is an evolution of the DEVSS platform featuring submerged propulsion for improved hydrodynamic efficiency and maneuverability in coastal waters.



Description



Autonomous navigation allows the platform to follow pre-programmed missions or manual control via remote links.
The modular payload bay supports integration of optical and acoustic sensors. Aerial propulsion minimizes underwater disturbance, enabling operations in sensitive shallow environments. Real-time adaptive control ensures stable navigation and mission execution.



Ultra-Resilient Carbon Fiber

The vehicle features a high-performance structure made entirely of carbon fiber, offering exceptional lightness combined with superior structural rigidity. The hulls are further reinforced with Kevlar to ensure maximum resistance to impacts, abrasions, and the harsh stresses of marine and river environments. Integrated directly into the hulls are powerful thrusters delivering 10 kg of thrust each, providing a compact, streamlined propulsion system that ensures precise and responsive navigation.

Modularity

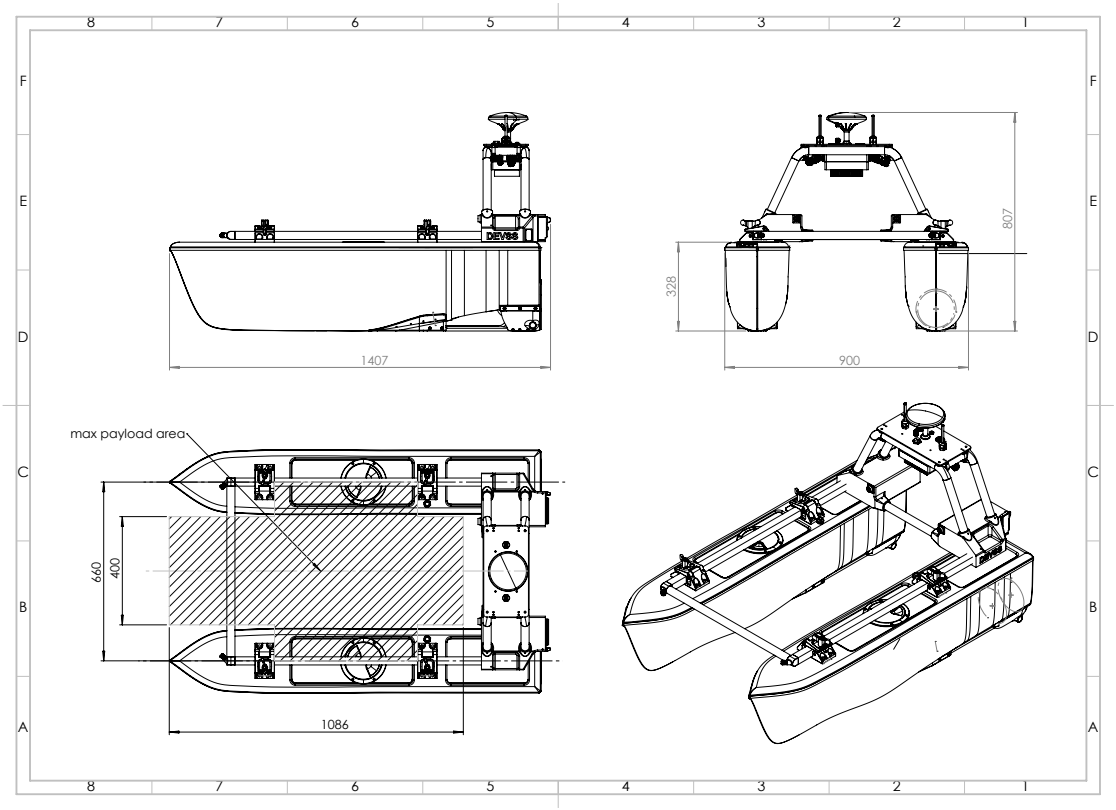
Designed with an open modular architecture, this autonomous surface vehicle (USV) enables fast, plug-and-play integration of diverse sensors for any mission. Operators can swiftly mount or swap equipment like 3D LiDARs, dual-antenna GNSS/RTK systems, and echo sounders on its frame without complex hardware modifications. A waterproof central payload bay securely houses data acquisition electronics and extra battery packs with minimal downtime. This versatile setup allows the drone to seamlessly transition between bathymetric surveys, environmental monitoring, and infrastructure inspections.



Technical Data

Dimensions (W x H x D)	900 x 790 x 1370 mm
Weight	15 Kg
Payload	25 kg
Materials	Inox steel, neoprene hulls
Propulsion	2x Submerged thrusters
Speed	Up to 5 kn
Power	LiPo 6S, 24 VDC
Autonomy	Up to 3 hours *
Remote Control	2.4 – 5 GHz
Interfaces	3 x Ethernet, 2 Aux Power Out (24V)
Connectivity	WiFi / Long-range Telemetry (1 Km)
Navigation	DEVSS Navigation Unit with DEVSS OS

Drawing



Optional Accessories



MBES Bathymetric Module

High-resolution hydrographic payload integrating a Norbit multibeam echosounder and a Trimble Applanix GNSS/INU positioning and attitude system for high-accuracy bathymetric data acquisition. The system features motorized mechatronic actuation for the automated deployment of the extended-geometry GNSS antennas and the lowering/retraction of the transducer pole. An integrated industrial Mini PC handles high-throughput local data storage and processing, interfacing natively with DEVSS OS for telemetry streaming, servomechanism control, and onboard diagnostics via the centralized control panel.

Automated Winch Payload

Mechatronic sampling and profiling payload engineered for the controlled lowering and retrieval of multiparameter probes (such as CTDs and environmental sensors) throughout the water column. The system features a precision motorized winch housed within a high-stability frame. Fully plug-and-play, it interfaces natively with DEVSS OS for dynamic deployment rate control, real-time depth profiling, and telemetry monitoring via the centralized control panel.





Environmental Perception and Collision Avoidance Module

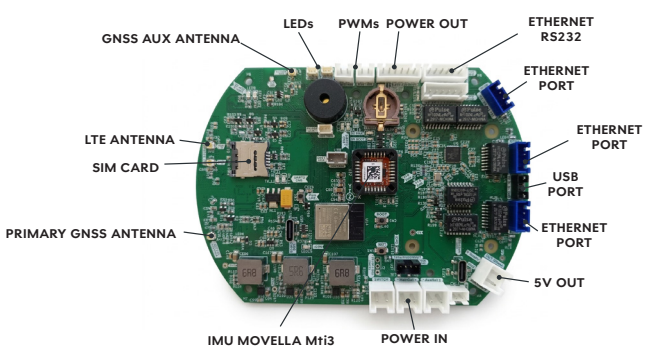
Integrated sensor payload engineered to extend the vehicle's spatial awareness through multisensor fusion, combining a 3D LiDAR, 4 optical cameras, and an onboard Radar system. Driven by a dedicated edge Logic Unit for real-time processing, the module provides comprehensive 360° situational awareness by detecting fixed and moving obstacles. Interfacing natively with DEVSS OS, it feeds the dynamic path planning algorithms to enable autonomous route generation with advanced collision avoidance capabilities.

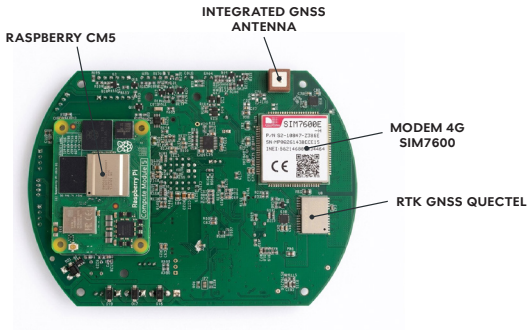
DEVSS NAVIGATION UNIT

Connect every sensor, master every route: the integrated solution to sensorize your ASV

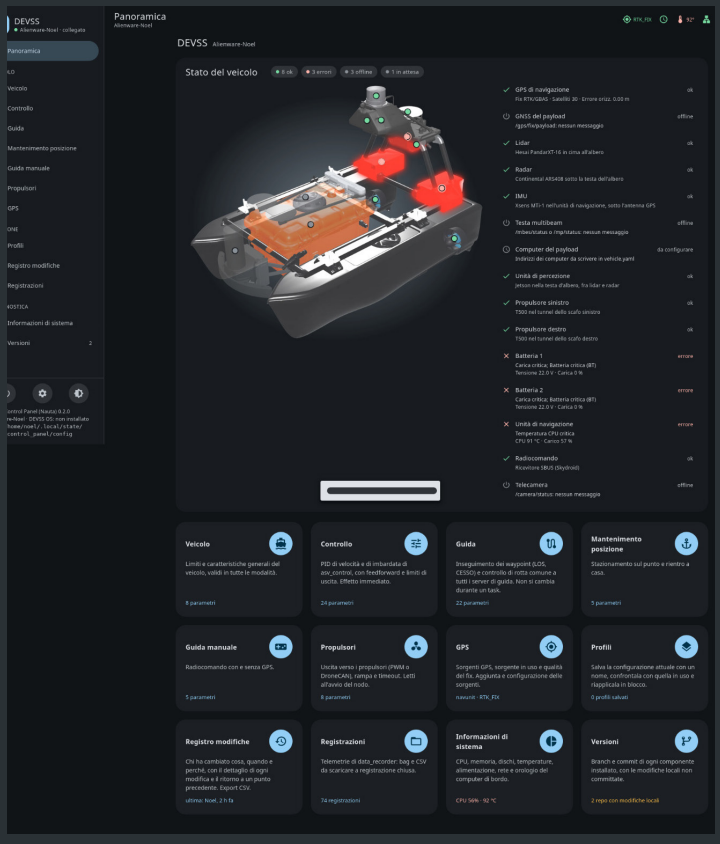


All-in-one





The DEVSS Navigation Unit features three Ethernet ports, a combo Ethernet/RS232 port, and a USB port for wired connectivity. For wireless communication and precise positioning, it provides connectors for an LTE antenna with an integrated SIM card slot, a primary GNSS antenna, and an auxiliary GNSS AUX antenna. Power distribution and actuation are handled via dedicated Power Out and +5V Out lines alongside PWM output connectors. Finally, onboard user interfaces include status LEDs, a buzzer, and integrated control buttons.



DEVSS OS - ROS2 compliance

DEVSS OS is the next-generation software architecture designed specifically for the utonomous surface vehicle (ASV). Built to power the evolution of the DEVSS platform—featuring submerged propulsion for improved hydrodynamic efficiency and maneuverability in coastal waters—DEVSS OS delivers full control, real-time diagnostics, and a centralized, intuitive user interface.

Key Features and Operating Modules:

- 360° Vehicle Status Monitoring
- Advanced Propulsion & Steering Control
- Navigation Planning & Station Keeping
- Flexible Control Modes
- Full Data Traceability & Logging
- Profile Management & System Diagnostics

SEAWASP

Unending autonomy, precision surface positioning

SEAWASP is a Autonomous Smart Buoy System is a powered buoy platform equipped with propulsion units and environmental sensors. It integrates GPS positioning and acoustic localization to monitor underwater assets and environmental conditions



Description



An autonomous marine platform featuring a high-visibility conical hull, engineered for extended maritime monitoring and survey missions. It integrates a submerged propulsion system with duct-housed thrusters to deliver maximum surface maneuverability and attitude stability. The upper section features integrated solar panels for continuous battery replenishment alongside a dedicated mast for communication and positioning antennas. Fully compatible with the DEVSS OS architecture.

Blueprint Seatrac X150 integration

The SEAWASP autonomous platform natively integrates the Blueprint SeaTrac X150 beacon, functioning as a high-precision surface USBL transponder buoy for real-time acoustic positioning and tracking of subsea assets.



Technical Data

Dimensions (W x H x D)	900 x 790 x 1370 mm
Weight	15 Kg
Payload	25 kg
Materials	Inox steel, neoprene hulls
Propulsion	2x Submerged thrusters
Speed	Up to 5 kn
Power	LiPo 6S, 24 VDC
Autonomy	Up to 3 hours *
Remote Control	2.4 – 5 GHz
Interfaces	3 x Ethernet, 2 Aux Power Out (24V)
Connectivity	WiFi / Long-range Telemetry (1 Km)
Navigation	DEVSS Navigation Unit with DEVSS OS

3D Research – Marine Robotics is a division dedicated to the development of advanced technologies for the exploration and monitoring of the marine environment.

Our modular platforms combine automated sampling tools, optical sensors, and physical-chemical sensing suites to acquire key bio-chemical parameters across the water column and seabed. Controlled by the unifying DEVSS OS architecture, these tools enable synchronized data collection, continuous environmental logging, and real-time telemetry from remote and challenging marine environments.

To support long-term sustainability and habitat protection, our solutions integrate subsea digital twin modeling and high-resolution 3D mapping, allowing researchers and environmental managers to track structural and ecological changes over time with minimal impact on delicate habitats.

By bridging robust field hardware with intelligent software systems, 3D Research delivers reliable tools to quantify, understand, and protect marine ecosystems in contexts where direct human intervention is limited or impossible.

ENVIROMENTAL **MONITORING**



TEREDO
Automated ROV Coring System

P.4



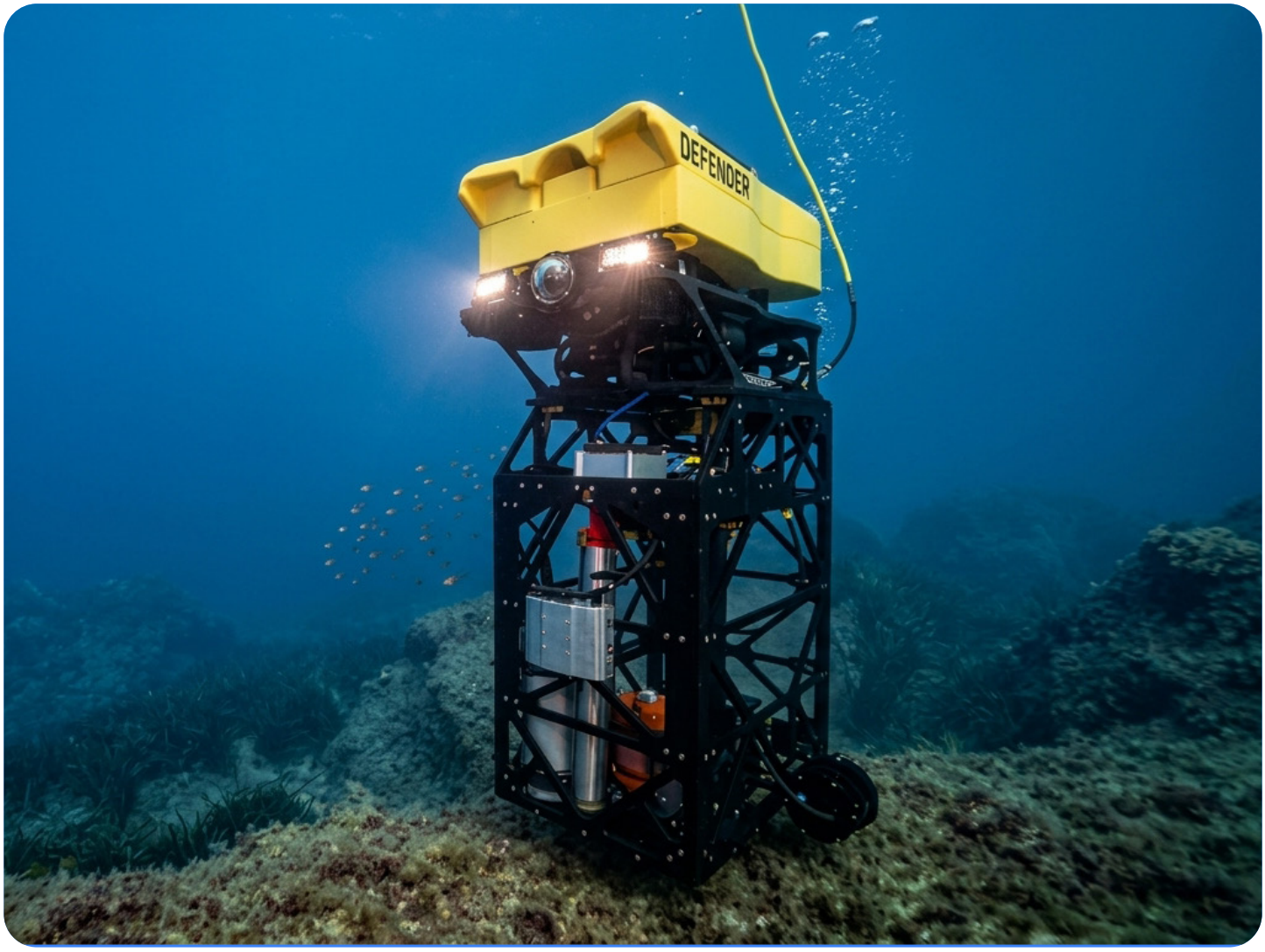
NereID
In-situ DNA preservation for uncompromised marine biodiversity metrics.

P.4

TEREDO

Automated ROV Coring System

TEREDO is a dedicated skid system designed to collect sediment cores and water samples using inspection-class ROVs during subsea missions

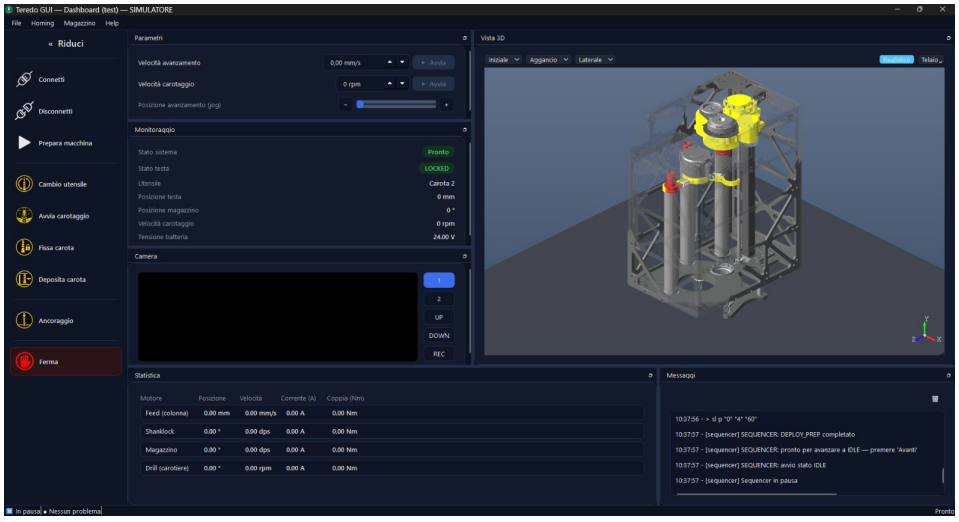


Description



The skid houses up to three core tubes stored in a protected magazine for sequential sampling operations. A hydraulic or electric actuator drives the corer into the seabed to retrieve sediment samples. The system allows multiple cores to be collected during a single dive, improving operational efficiency. Designed for compatibility with inspection-class ROVs, the skid integrates easily with standard robotic platforms.

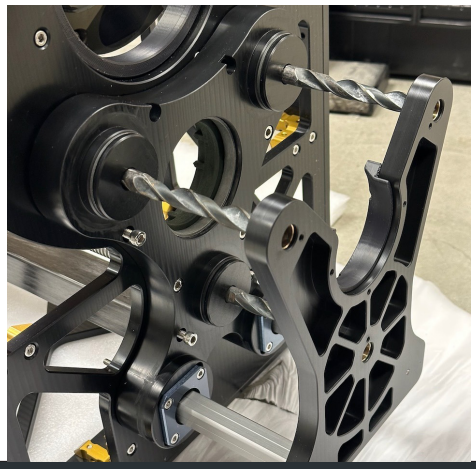
TEREDO GUI – Control & Advanced Diagnostics Software





TEREDO GUI is the dedicated control interface for the TEREDO ROV subsea coring system, engineered to provide operators with complete, intuitive, real-time control over every phase of drilling and sampling operations.

- Real-Time 3D Digital Twin Visualization
- Parametric Drilling Control
- Automated Sequences & Quick Commands
- Motor Telemetry & Live Statistics
- Video Management & Event Logging



Synchronous 3-Point Anchoring System

High-stability fixation module utilizing three synchronously driven helical drill bits to firmly anchor the structure into the seabed. Simultaneous 3-point penetration via an integrated thrust plate eliminates frame oscillations and counteracts reaction forces during coring operations. Natively controlled by TEREDO GUI, it ensures maximum operational rigidity and real-time management of the anchoring cycle.

Rotary Sample Carousel Module

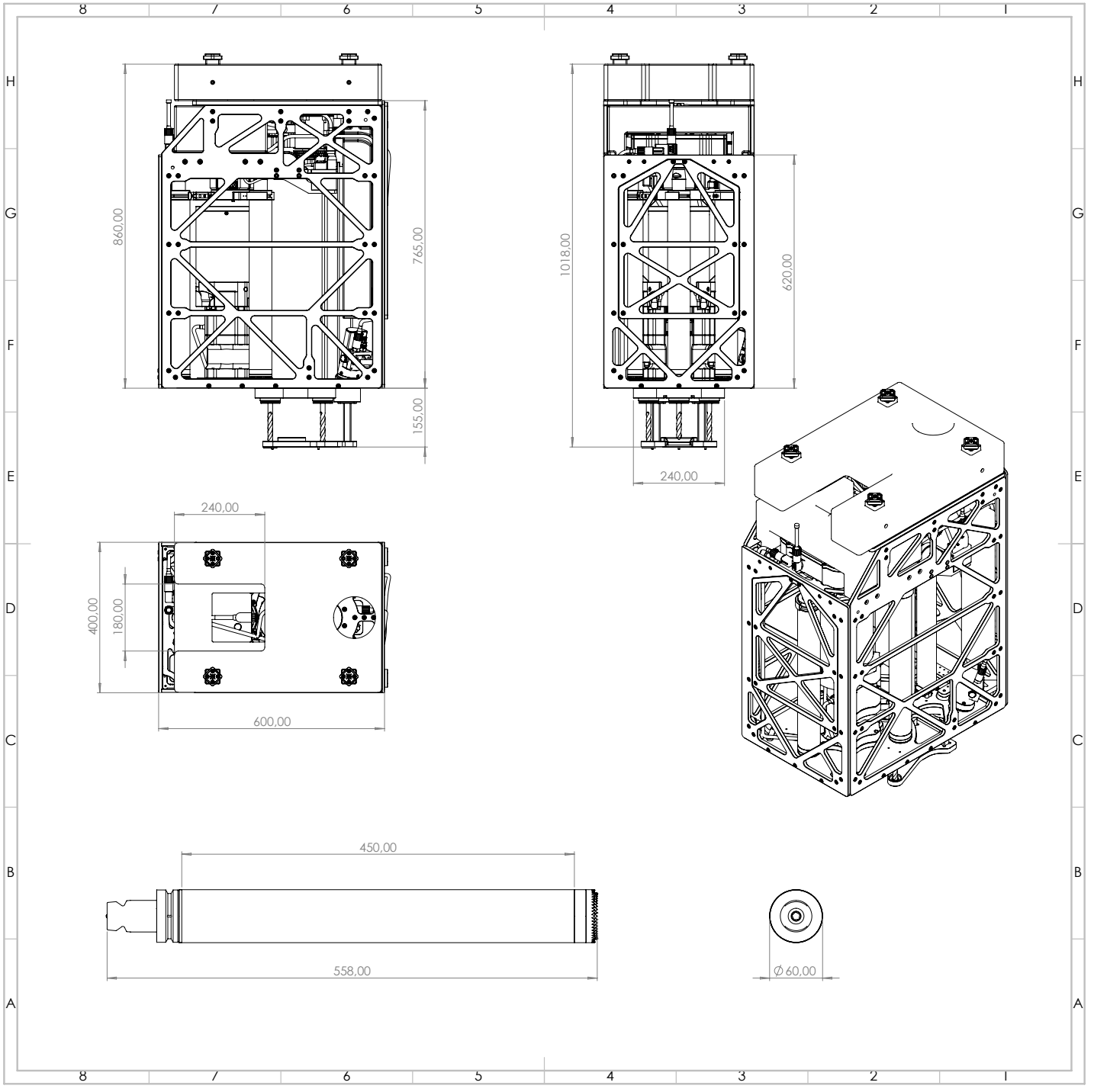
Compact revolver-style mechanical system designed for holding, indexing, and securely locking up to 3 core sampling tools. Utilizing a precision three-arm mechanism with positive mechanical latching, it automatically manages core barrel selection and tool swapping during subsea operations. Fully integrated with TEREDO GUI, it provides real-time monitoring of angular position, tool status, and sample storage verification.



Technical Data

Dimensions (W x H x D)	400 x 920 x 600 mm
Weight (in air)	45 Kg
Weight (in water)	2 kg
Spindle torque	30 Nm
Core dimensions	50 cm lenght x5 cm diameter
Num Core	3
Anchoring system	3 counter rotating anchoring spikes
Power supply	Internal 48 V battery
Remote Control	2.4 – 5 GHz
Communication interface	Ethernet
Connector	8 pin SubConn connectors
Accessories	DVL mounting provision 2 x FullHD Cameras Integrated illuminators

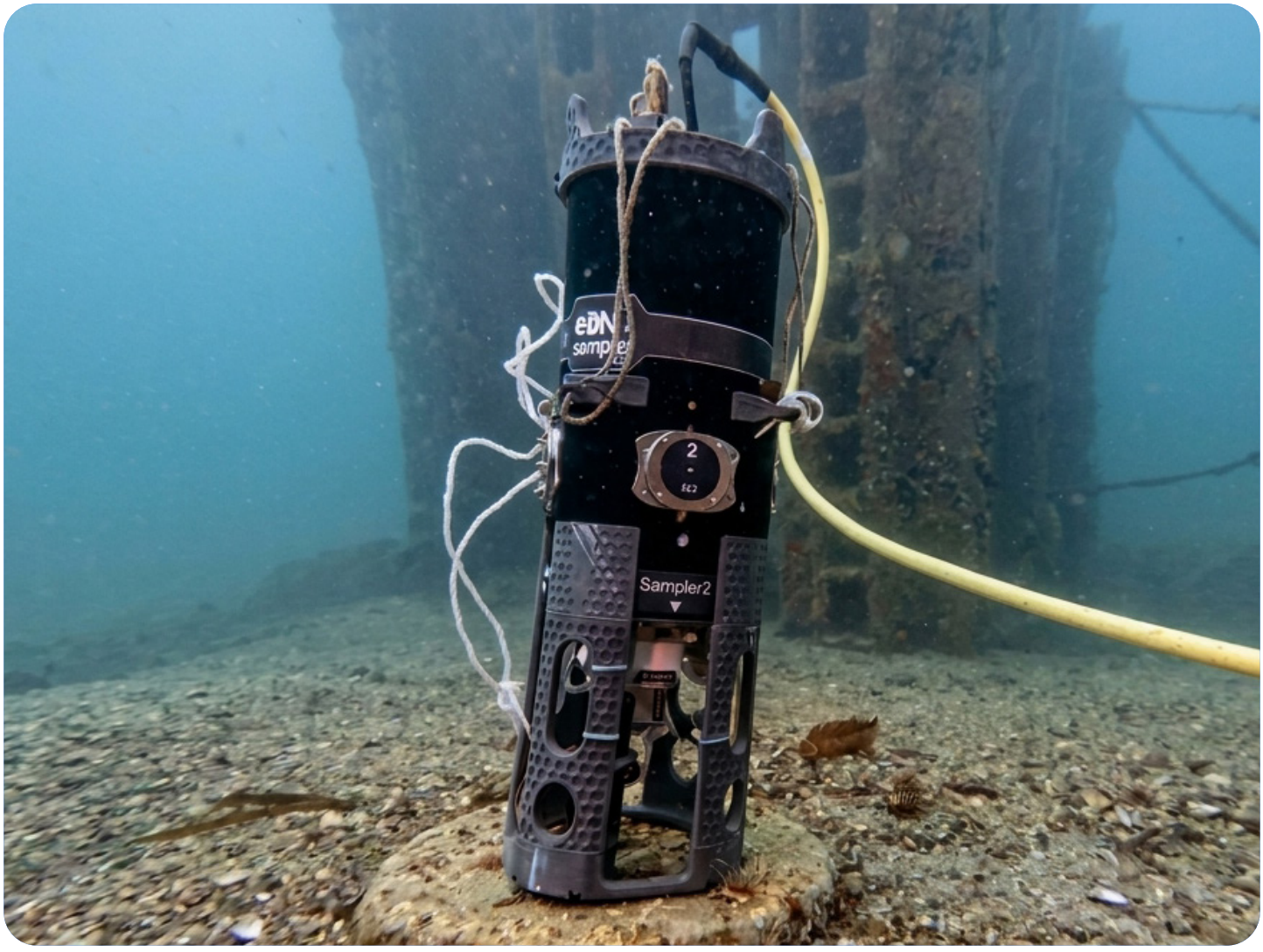
Drawing


860,00
765,00
155,00
1018,00
620,00
240,00
240,00
400,00
180,00
600,00
450,00
558,00
Ø 60,00

NereID

In-situ DNA preservation for uncompromised marine biodiversity

NereID is an environmental DNA sampling system designed for autonomous biological monitoring in aquatic environments. It enables repeatable water sampling campaigns for biodiversity and ecosystem analysis.



Description



The skid houses up to three core tubes stored in a protected magazine for sequential sampling operations. A hydraulic or electric actuator drives the corer into the seabed to retrieve sediment samples. The system allows multiple cores to be collected during a single dive, improving operational efficiency. Designed for compatibility with inspection-class ROVs, the skid integrates easily with standard robotic platforms.

Operational Workflow

- **Precharge & Line Conditioning**: Automated selection of the independent sampling channel, system pre-charge, and pressure/flow sensor calibration to isolate the hydraulic line.
- **Sampling & In-Line Filtration**: Active drawing of seawater via integrated pumping, passing a defined volume through the internal filter unit before venting waste water overboard.
- **Preservative Fixation**: Controlled injection of fluid fixative directly from the dedicated reservoir onto the filter matrix to prevent eDNA degradation in situ.
- **Cycle Completion & Sealing**: Valve shut-off upon target volume reach, securing the sample while logging depth, temperature, and volumetric telemetry for analysis.



UNDERWATER SMART SPEAKER

The Under Water Smart Speaker is a next-generation underwater audio guide designed to enhance diving experiences across marine parks, submerged archaeological sites, and guided dive trails. Combining a rugged, high-visibility chassis with intuitive controls, it allows divers to listen to detailed educational and historical commentary while exploring—completely hands-free and hassle-free.



Description



Designed for high performance underwater, the Under Water Smart Speaker features a high-impact, high-visibility orange casing framed by protective black rubberized bumpers, complete with textured side grips for effortless handling even with heavy neoprene gloves. Its front control panel is optimized for divers, presenting large, high-contrast icons for Play/Pause and track navigation that ensure intuitive operation below the surface. Acoustic delivery is powered by a specially engineered micro-perforated grille optimized for clear sub-surface sound transmission. For maximum flexibility, integrated side attachment points allow the device to be securely fastened to mask straps, BCDs, or safety lanyards. Grounded in cutting-edge European R&D

Technical Data

Dimensions (W x H x D)	66 x 106 x 24 mm
Weight (in air)	50 g
Weight (in water)	220 g
Max depth	30 m
Colors	Orange - Black
Materials	ABS/ Polyurethane
Speaker	40 mm piezo speaker
Memory	8 Gb
Display	RGB LED Matrix 12 x 15
Autonomy	5 hours
Power supply	5 V , max 2 A
Connector	underwater 4 pogopin



3D RESEARCH
MARINE ROBOTICS

your exploring companion

UETs Catalog 2026

3D Research – Marine Robotics is a division dedicated to the development of advanced technologies for the exploration and monitoring of the marine environment.

The company designs and integrates robotic systems, data acquisition platforms and analytical tools dedicated to marine research, underwater archaeological documentation and environmental monitoring. The developed solutions combine marine robotics, advanced sensing systems, optical and acoustic technologies, and high-resolution 3D reconstruction systems.

Through the use of ROVs, AUVs and autonomous surface vehicles equipped with modular sensor suites, 3D Research provides tools and services for seabed mapping, submerged infrastructure inspection and the analysis of complex marine ecosystems.

Alongside hardware development, the company also develops software platforms, robotic mission simulators and digital twin systems for the planning, training and analysis of underwater operations.

The objective is to make the underwater environment accessible and observable through innovative technologies capable of acquiring, processing and interpreting data in contexts where direct human intervention is limited or impossible.

UNDERWATER **ELECTRIC TOOLS**



RODON100
Electric power and reliability down to a depth of 100 meters

P.4



RODON HD
Hammer drill tool for harsh enviroments

P.6



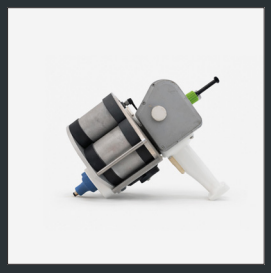
AQUA BRUSH200
From biofouling removal to metal cutting: versatile power underwater.

P.8



AQUA CHISEL PRO
From precise biofouling removal to concrete demolition.

P.10



HYDRO SHIELD
High-precision injection for securing and consolidating submerged structures.

P.12

RODON100

Electric power and reliability down to a depth of 100 meters

Compact and eco-friendly battery-powered underwater electric drill, designed to operate at depths of up to 100 meters with 90 minutes of continuous runtime.
Equipped with a brushless motor, patented magnetic induction drive, and a safety system for quick battery release underwater, it ensures maximum performance and reliability in underwater operations



Description



Rodon 100 is the first undrwater drill that allows the operator to replace the battery directly underwater thanks to Tech4sea patented system. It is adaptable, in fact it can be used both as screwdriver or as a drill. It doesn't need any support boat because it is battery powered. It's resistant thanks to series 6 aluminum anodized bodyshell.

Technical Data

Dimensions (W x H x D)	536 x 154 x 367 mm
Depth rating	100 m
Weight (in air)	8.9 Kg
Weight (in water)	2.7 kg
Materials	Hard -anodized aluminum
Chuck attachment	SDS-plus
Max continuos torque	10 Nm
Bits max size	13 mm
Battery	2x Li-Ion 4 Ah
Voltage	18 V

Optional Accessories



Battery pack
5 Ah 18 V
Underwater Safety Connection System (USCS)



Waterproof Case
Dust/Splash proof
Polypropylene copolymer structure
Double lock arrangment

RODON HD

Hammer drill tool for harsh enviroments

The hammer drill tool allows the operator to replace the battery directly underwater thanks to Tech4sea patented system. It does not need any support boat because it is battery powered. It is resistant thanks to the series 6 hard-anodized aluminum body. The tool allows drilling and chisel effectively in concrete with standard SDS drill bit thanks to the electropneumatic hammer system. The hammer function can be deactivated to drill in wood and steel. With coring drill accessories, the tool can be used for coring operation in concrete up to a diameter of 68 mm.



Description



Designed for the most demanding marine and underwater applications, RODON HD delivers maximum drilling and demolition power on concrete and stone.
Its ultra-heavy-duty structure and optimized hydrodynamics ensure high performance, maximum precision, and total reliability even under the most extreme submerged operating conditions.

Technical Data

Dimensions (W x H x D)	536 x 154 x 367 mm
Depth rating	100 m
Weight (in air)	9.4 Kg
Weight (in water)	3.57 kg
Materials	Hard -anodized aluminum
Chuck attachment	SDS-plus
Impact energy	3.2 J
Rated speed	0 - 1400 RPM
Impact rate at rated speed	0 - 6200 bpm
Power output	3100 W
Battery	2x Li-Ion 4 Ah
Voltage	18 V

Optional Accessories

Chisels
Drill bits
Coring tools
Carrying case



Waterproof Case
Dust/Splash proof
Polypropylene copolymer structure
Double lock arrangment

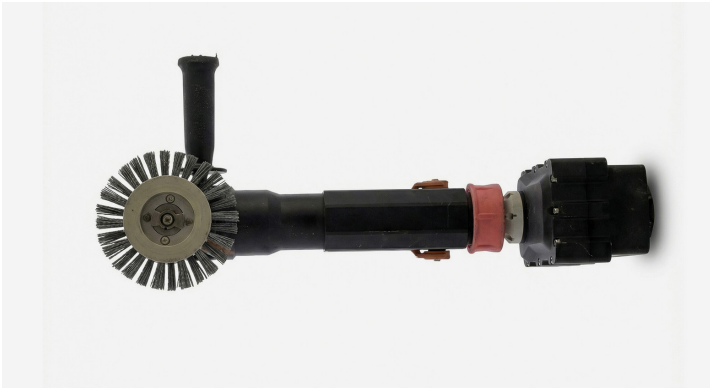
AQUA BRUSH200

From biofouling removal to metal cutting: versatile power underwater.

Professional underwater power tool with a CNC-machined aluminum body, designed for fast and effective cleaning of submerged structures using modular brushes up to 200 mm. It combines high power with maximum ergonomics to ensure flawless results even during the most demanding maintenance operations



Description



A versatile and powerful solution for the marine sector, available both for heavy biofouling removal and for metal cutting and grinding operations. Its robust CNC-machined aluminum structure and compatibility with a wide range of accessories make it an indispensable tool for subsea professionals.

Technical Data

Dimensions (W x H x D)	398 x 99 x 140 mm
Depth rating	100 m
Weight (in air)	2.6 Kg
Weight (in water)	1.4 kg
Materials	Hard -anodized aluminum
Threaded spindle	M14 x 2
Brush no-load speed	speed1 = 1000 RPM speed2 = 1500 RPM
Grinder configuration speed	10000 RPM
Cutting disc diameter	110 mm
Brush configuration power	1750W
Grinder configuration power	2600 W
Battery	Li-Ion 2 Ah

Optional Accessories

Brushes:

Nylon

Abrasive nylon

Steel

Tampico fiber



Waterproof Case

Dust/Splash proof

Polypropylene copolymer structure

Double lock arrangment

AQUA CHISEL PRO

From precise biofouling removal to concrete demolition.

A high-performance underwater power chisel engineered for precise restoration and heavy-duty subsea demolition. Delivering high impact energy with exceptional control, it effectively tackles marine encrustations, concrete surfaces, and tough submerged materials.



Description



Built for demanding subsea environments, this professional underwater chisel combines robust construction with optimal ergonomic balance. It provides commercial divers with the power and precision needed for fast biofouling removal and structural maintenance.

Technical Data

Dimensions (W x H x D)	373 x 82 x 150 mm
Depth rating	100 m
Weight (in air)	3.8 Kg
Weight (in water)	2.2 kg
Materials	Hard -anodized aluminum
Chuck attachment	SDS-plus
Impact energy	3.2 J
Impact rate at rated speed	0 - 6200 bpm
Power output	3100 W
Battery	Li-Ion 2 Ah
Voltage	18 V

Optional Accessories

Chisels
Drill bits
Coring tools
Carrying case

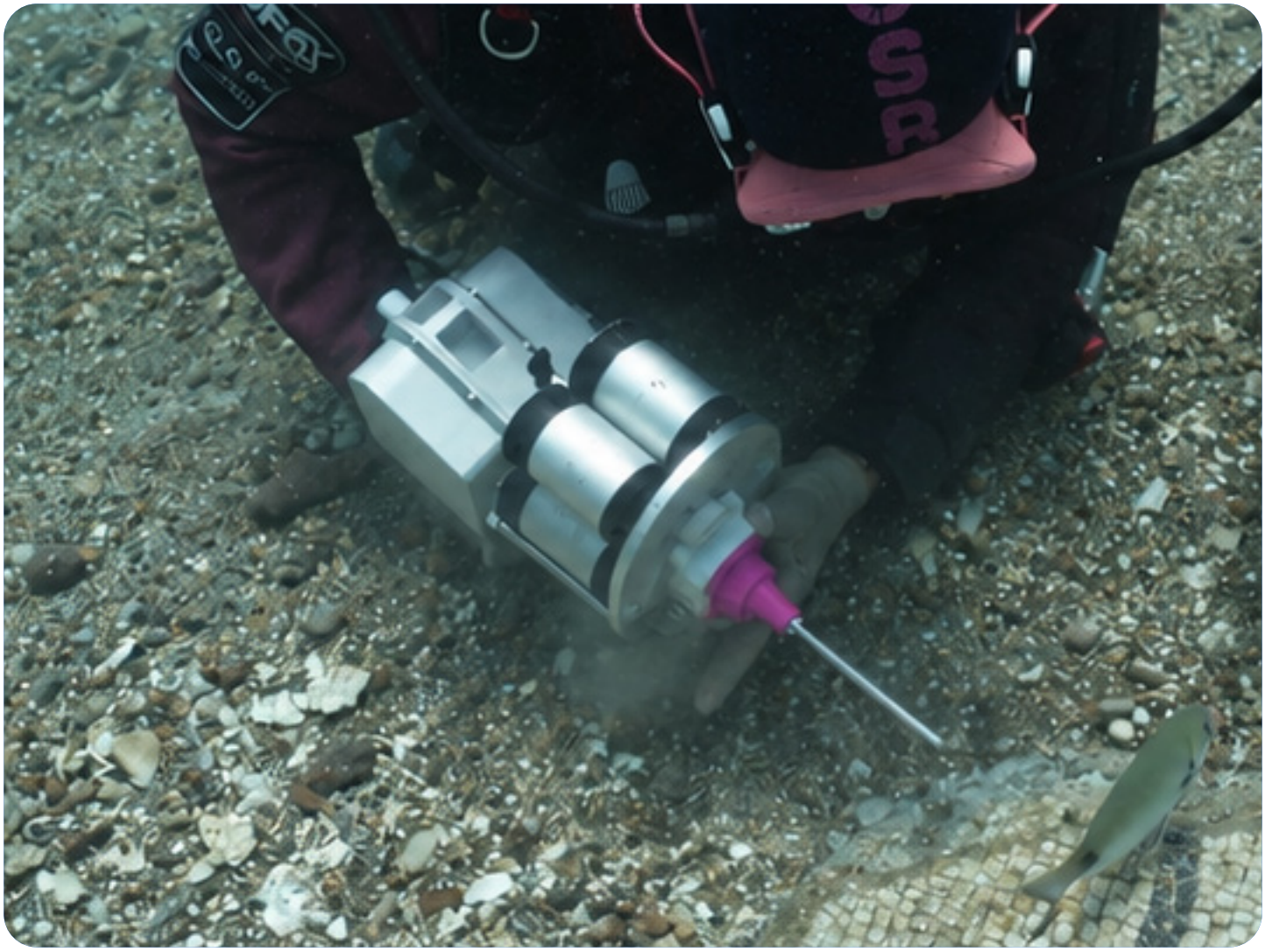


Waterproof Case
Dust/Splash proof
Polypropylene copolymer structure
Double lock arrangment

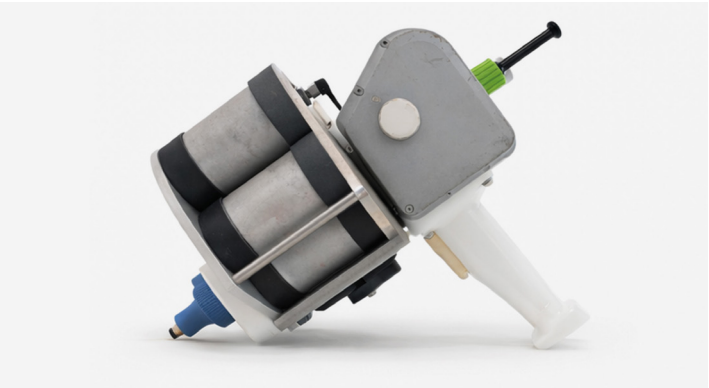
HYDRO SHIELD

High-precision injection for securing and consolidating submerged structures.

An advanced subsea injection system designed for the precise application of protective agents and consolidants on submerged structures. It delivers accurate dosing and optimal material penetration, ensuring long-term structural integrity and defense against underwater deterioration.



Description



Engineered for critical subsea restoration and maintenance, this high-precision injector provides commercial divers with reliable control when sealing and stabilizing underwater assets. Its robust design ensures consistent chemical delivery even in demanding marine environments.

Technical Data

Dimensions (W x H x D)	373 x 82 x 150 mm
Depth rating	100 m
Weight (in air)	3.8 Kg
Weight (in water)	2.2 kg
Materials	Hard -anodized aluminum
Chuck attachment	SDS-plus
Impact energy	3.2 J
Impact rate at rated speed	0 - 6200 bpm
Power output	3100 W
Battery	Li-Ion 2 Ah
Voltage	18 V

Optional Accessories

Nozzles
Cartridges
External battery pack



Waterproof Case
Dust/Splash proof
Polypropylene copolymer structure
Double lock arrangment

3D Research s.r.l.
Marine Robotics Division

Via Orazio Antinori ,36/C
87036 Rende (CS)
Italy
https://www.3dresearch.it/marinerobotics

