SEASAM

by notilo plus

CATALOG
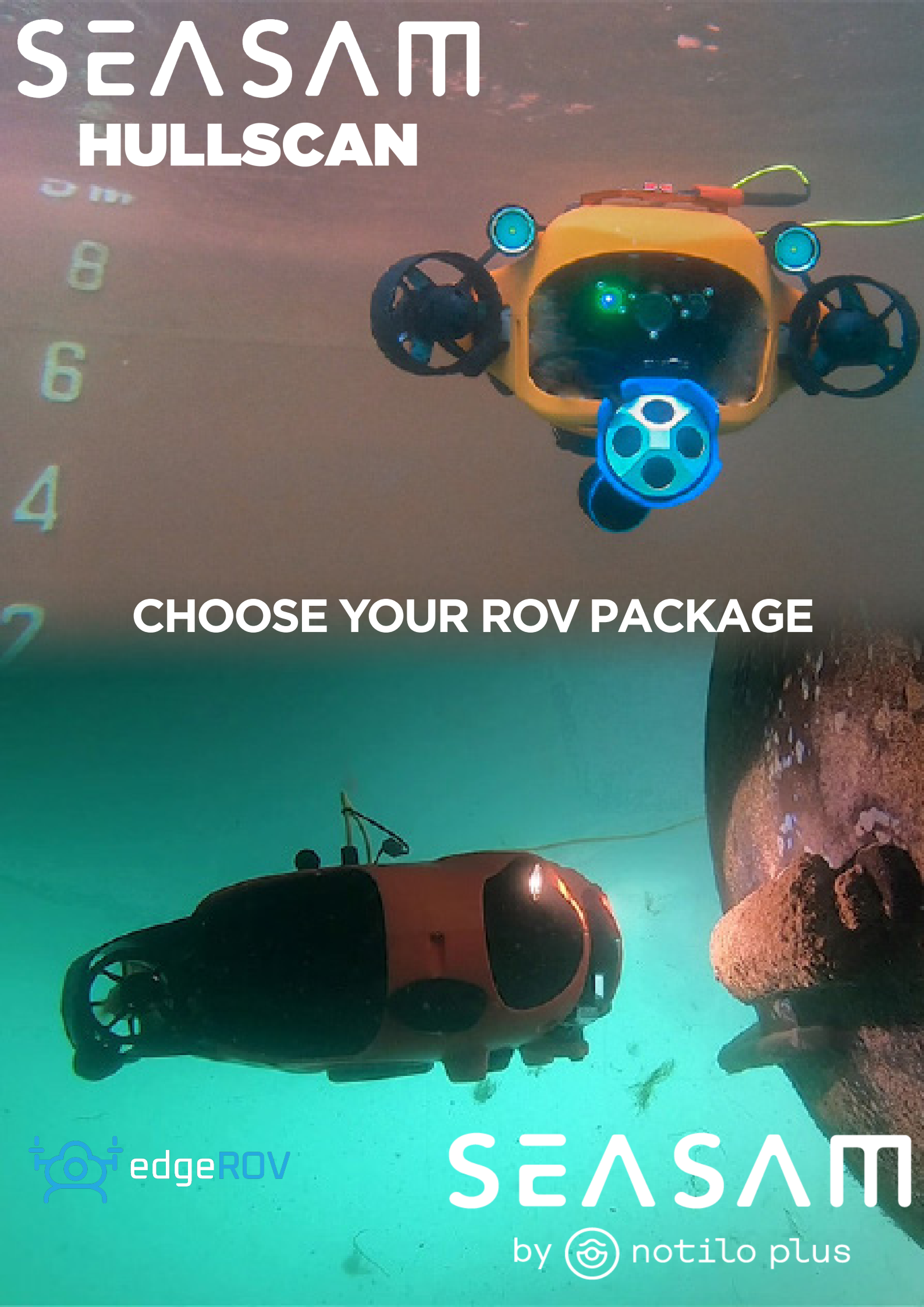# 2022/2023

Updated Sept. 2022

edgeROV

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SEASAM
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CHOOSE YOUR ROV PACKAGE

edgeROV

SEASAM
by notilo plus

PACKAGE CONFIGURATION

SEASAM

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CHOOSE AND CONFIGURE YOUR ROV

The **Seasam ecosystem** is highly modular.
First, build a functional pack by making a selection for each
of the following 5 core components (details in the next pages).

1 Connector type

Standard

Subconn premium connector

2 Surface control for ROV mode

100m Wi-Fi reel

200m Wi-Fi reel

Seasam Navigator

Seasam Navigator with underwater location

3 Batteries & chargers

Pack of 3 M-size batteries

Pack of 3 L-size batteries

1 XL-size battery

4 Control unit

11" tablet Samsung Galaxy Tab Active Pro

11" rugged tablet Getac F110

14" rugged tablet Getac A140

5 Notilo Cloud subscription

Notilo Cloud, Free version

Notilo Cloud, Standard version

Notilo Cloud, Ships version

After selecting the 5 core components above, you can add 3rd party
sensors and other options appearing later in the catalogue to perfect
your package.

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SEASAM
DRONE

The **Seasam Underwater Drone™**
base content comes with the following items :

Click here to watch
video on Seasam
Autonomous Drone

Basic Seasam Drone
Towel and flexible pocket
Waterproofing Kit
Pair of long side handles
Battery compartment opening tool
Key ring
Soft pouch
Seasam Control™ app and free updates

DOWNLOAD THE PRODUCT SHEET

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Ref. **SEASAM-00**

SEASAM
HULLSCAN

NEW !

The **Seasam HullScan™**
base content comes with the following items :

Seasam HullScan Drone
DVL
Waterproofing Kit
Towel and flexible pocket
Battery compartment opening tool
Key ring
Soft pouch
Seasam Control™ app and free updates

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Ref. **SEASAM-00H**

7

1 CONNECTOR TYPE
PICK ONE OPTION

STANDARD CONNECTOR

This standard connector is screwed and unscrewed to the drone. The contact is waterproof and low-maintenance.

SUBCONN CONNECTOR UPGRADE

Upgrade your Seasam connector (drone & reel) to the industry-leading Subconn tether connector.

• Easy and secure connection
• Robustness and hydrodynamic profile
• Can be connected and disconnected underwater.

Ref. **SUBCON-001**

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100M TETHER AND WIFI REEL

This 100m tether reel connects to the **Seasam Drone™** for R.O.V. mode usage.

Includes a WiFi beacon for wireless connection to the control unit. The tether cable is marked every meter.
The tether reel will be provided with the same connector as per chosen from the previous page.
Includes a cable spool physical brake.

Cable length	(m)	100
Dimensions	(cm)	40 x 40 x30
Charging time	(hrs)	6
Autonomy	(hrs)	8

Ref. **OMBIL-100**

200M TETHER AND WIFI REEL

This 200m tether reel connects to the **Seasam Drone™** for R.O.V. mode usage.

Includes a WiFi beacon for wireless connection to the control unit. The tether cable is marked every meter.

Includes a cable spool physical brake and cable guide for a clean reeling.

Cable length	(m)	200
Dimensions	(cm)	40 x 40 x30
Charging time	(hrs)	6
Autonomy	(hrs)	8

Ref. **OMBIL-200**

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SEASAM NAVIGATOR

Seasam Navigator uses GPS positionning. When connected to the Seasam drone, it acts as a long-range relay.

The live, geolocated position of the **Seasam Navigator** is available live in the Control app. Drop location pins using the GPS location of Navigator visible in Seasam Control (location accuracy at surface: ~1m).

Includes:
- Seasam Navigator
- Tethered connection between Navigator & Drone (one custom length between 1m - 100m, to choose at the time of the order)
- Ground station
- Medium hardcase
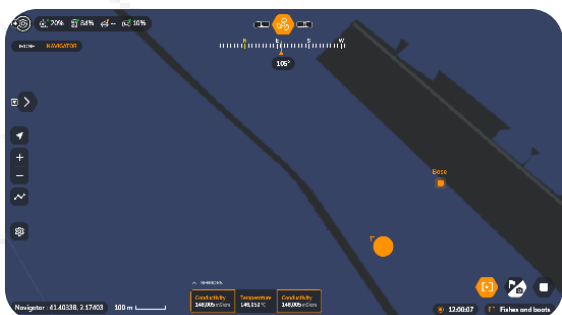

Seasam Navigator

Ground station

Hardcase

Tethered connection

Wifi range	(m)	300
Dimensions	(cm)	40 x 40 x 32,5
Weight	(kg)	3,8
Navigator GPS accuracy	(m)	1

Equipped with 3 propellers, Navigator will also be pilotable independently, navigate to waypoint autonomously and more features to come through software update...

Maximal nominal speed	(m/s)	1,5
Number of thruster		3
Current resistance	(m/s)	1

Ref. **NAV001-MOT**

Cartography view in Seasam Control App showing Seasam Navigator's position.
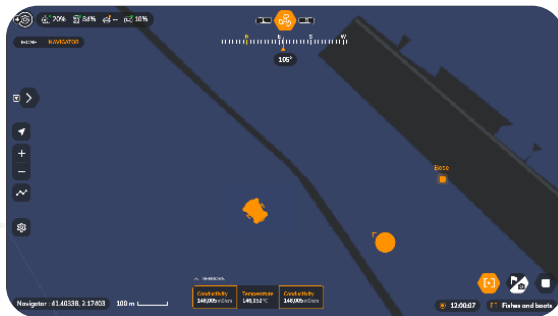
CLICK HERE TO WATCH THE PRODUCT VIDEO

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SEASAM NAVIGATOR
WITH UNDERWATER LOCATION

Seasam Navigator

USBL

The USBL technology provides the location of the Seasam Drone relative to the Seasam Navigator. Therefore, the actual position of the Seasam Drone underwater is more accurately determined.

The location pack consists of a USBL transmitter to be mounted on the Seasam Drone, and a receiver mounted on a pole under the Seasam Navigator. System calibration is performed through Seasam Control App.

Tethered connection

Hardcase

Ground station

Positioning precision of the drone relative to the Navigator	(%)	10% distance drone - navigator

Cartography view in Seasam Control App showing both Seasam drone's and Seasam Navigator's position.

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Ref. **NAV001-MOT-USBL**

RTK INTEGRATION OPTION

The RTK correction leads to better **precision** and relay of **localisation**. RTK service is country-dependent.
Please contact us for more information.

Navigator GPS precision	(cm)	2

RTKCOR-001

3 BATTERIES INITIAL PACK

PICK ONE OPTION

PACK OF 3 M BATTERIES
6600 MAH

Standard Lithium-Ion battery - 6600 mAh

Recommended for light underwater operations in standard water conditions.

Power	(Wh)	95
Battery type		Li-Ion
Autonomy	(hrs)	1,5
Charging	(hrs)	2

Ref. **ABATT-003**

PACK OF 3 L BATTERIES
10400 MAH

Large Lithium-Ion battery. Includes buoyancy adjusters.

Recommended for inspections in a current of more than 0.5 knot.

International transport restrictions may apply, contact us.

Power	(Wh)	149
Battery type		Li-Ion
Autonomy	(hrs)	2
Charging	(hrs)	4

Ref. **ABATT-03L**

XL BATTERY
28800 MAH

Extra Large capacity Lithium-Ion battery - 28800 mAh

Includes extended battery compartment, and buoyancy adjusters.
Recommended for applications involving external sensors, or for missions requiring longer uninterrupted inspections.

International transport restrictions may apply, contact us.

Power	(Wh)	414
Battery type		Li-Ion
Autonomy	(hrs)	4
Charging	(hrs)	6

Ref. **ABATT-1XL-COMP**

4 SURFACE CONTROL UNIT

PICK ONE OPTION

STANDARD CONTROL UNIT
10.1 INCHES

Standard control unit **Samsung Tab Active Pro** to be used with your **Seasam Drone™**.

Comes with a standard ROV controller, a protective case and pilot harness, a transport case, sun visor & **Seasam Control™** preinstalled.

Screen size	(in)	10.1, 1920 x 1200
Rating		IP68
Battery capacity	(mAh)	7600
Max brightness	(nits)	601
OS		Android
Option		4G

Ref. **CONTR-001**

4G connectivity option available
Ref. **CONTR-14G**

RUGGED CONTROL UNIT
11.6 INCHES

Rugged control unit **GETAC F110** for usage with **Seasam Drone™**.

For heavy duty usage - Comes with a standard ROV controller, a protective case and pilot harness, a transport case, sun visor & **Seasam Control™** preinstalled.

Screen size	(in)	11,6
Screen type		Water resistant
Rating		MIL-STD-461 & MIL-STD-810G & IP65
Battery capacity	(mAh)	2*2160
OS		Windows 10
Max brightness	(nits)	1000
Options available		RFID, fingerprint scanner, ATEX/IECEx certifications
Option		4G

Ref. **CONTR-002**
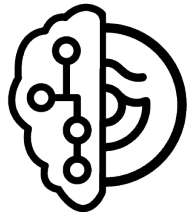
RUGGED CONTROL UNIT
14 INCHES

Rugged control unit **GETAC A140 G2**, multipoint capacitive 14" screen..

Comes with a standard ROV controller, a protective case and pilot harness, a transport case, sun visor & **Seasam Control™** preinstalled.

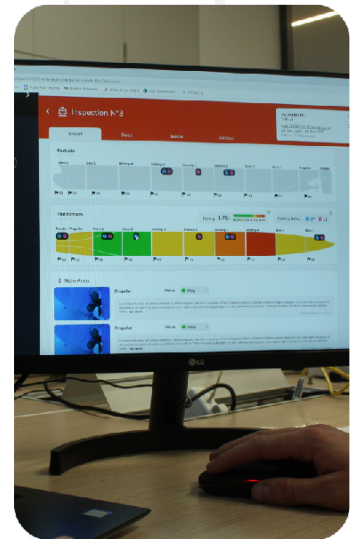| Screen size	(in)	14" (1 366 x 768)
Rating		MIL-STD-810H & IP65
Battery capacity	(mAh)	10,8 V, 3 220 mAh
Max brightness	(nits)	1000
Option available		RFID, fingerprint scanner, ATEX/IECExx certifications
OS		Windows 10 Pro
Option		4G

Ref. **CONTR-003**

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5 notilo cloud

Developed in partnership with major players in the maritime sector, Notilo Cloud is an digital data storage, processing and analysis platform for your underwater data. It allow you to easily **edit ROV reports** and **centralize all your data in a secure place, accessible anytime from anywhere**.

The **interoperability** of this new platform allows you to use all the data you collect, regardless of its origin. Even if you are **using third party sensors or R.O.V.**

CLOUD PLANS & FEATURES		
NOTILO CLOUD FREE	***NOTILO CLOUD SHIPS***	***NOTILO CLOUD FLEET***
Creation of total inspection video including time & depth	Multi-users, multi-mission inspection management	Multi-vessel, multi-operations report management
Download & sharing of inspection video	Video annotation & data timelines	Video annotation & data timelines Fleet hull definintion and organisation
10 missions / 20 dives 10 Go storage included	200 missions / 400 dives 1 To storage included	200 Go storage per vessel
3 users	10 users	20 users
	Simplified creation of reports	Simplified creation of reports
Click here to watch video on Notilo Cloud	Smart Reports generation, on demand (2 per year free) Automatically generated, including: • *AI biofouling score* • *Painting defects count* • *Smart data filters*	Operations report management per location / per vessel
		Smart Report aggregation and global tracking of evolution
		Dashboard customisation possibilities
	Notilo Cloud portal registration	Fleet-to-picture™ zoom (with Seasam Navigator)
		Notilo Cloud portal registration

LEARN MORE ABOUT NOTILO CLOUD

THIRD PARTY INTEGRATION

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OCULUS BLUEPRINT SONAR INTEGRATION

Add sonar vision to Seasam Control™ App by adding a multi-beam sonar to your Seasam setup.

M750d

Range Max	(m)	120 / 40
Frequency	(kHz)	From 750 to 1200
Update rate	(Hz)	40
Range Resolution	(mm)	4 / 2.5

Ref. **CHWI-750**

M1200d

Range Max	(m)	40 / 10
Frequency	(kHz)	From 1200 to 2100
Update rate	(Hz)	40
Range Resolution	(mm)	2.5/ 2.5

Ref. **CHWI-1200**

INTEGRATION OF WATERLINKED A50 DVL

Improve servoing accuracy & underwater location ability thanks to this compact yet powerful Doppler Velocity Log.
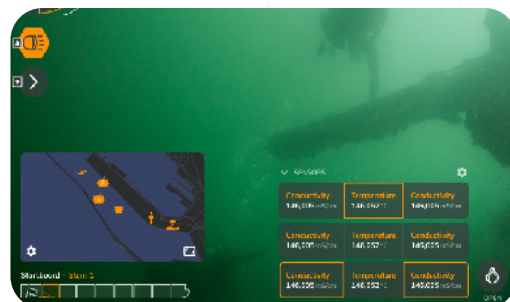The DVL is already integrated in the Hullscan package.

Ref. **WATDVL-001**

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XYLEM EXO2S
PROBE INTEGRATION

Multiparameter water quality sensor with 7 sensor ports (including a central wiper port), optional depth sensor, and battery compartment.

Sensor options available :
• *Conductivity/Temperature (wiped and non-wiped)*
• *Dissolved Oxygen*
• *fDOM*
• *ISEs (Ammonium, Chloride, and Nitrate)*
• *pH (guarded and unguarded)*
• *pH & ORP (guarded and unguarded)*
• *Rhodamine*
• *Total Algae (Chlorophyll + Phycocyanin and Phycoerythrin)*
• *Turbidity*

Operating Temperature	°	-5 to +50
Environmental support		Fresh, sea and polluted waters
Sample rate	(Hz)	4
Weight	(kg)	3.60

Ref. **CHCTD-001**

EXPLOCAM
INTEGRATION

The **ExploCam** endoscopic camera is a secondary camera for the **Seasam Drone** that allows inspection behind grids or inside cavities. It is perfectly suitable for inspections of sea chests or scrubber discharges pipes.

The video feed from ExploCam is displayed in real time in Seasam Control App alongside Seasam drone main camera and can be synchronised to Notilo Cloud.

Ref. **EXPLO-001**

CLICK HERE TO WATCH THE PRODUCT VIDEO

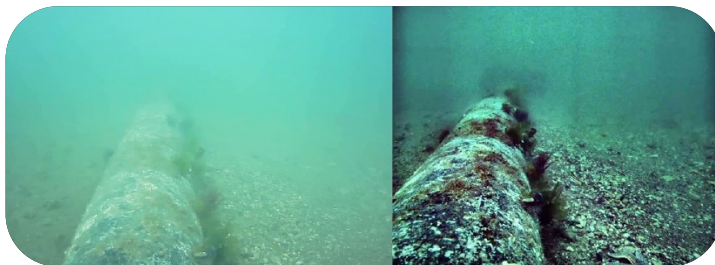**DOWNLOAD THE PRODUCT SHEET**

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ORPHIE CAMERA INTEGRATION

The Orphie Camera™ dramatically improves underwater vision.

With this integration, it will be much easier to see features in murky waters.

A camera that, with the help of innovative image processing algorithms, provides real-time video image quality unmatched in the underwater camera industry.

Requires Seasam Sensor Hub (see page 21)

Ref. **ORPHI-001**

CLICK HERE TO WATCH THE TEASER VIDEO

DOWNLOAD THE PRODUCT SHEET

SB10 LASER SCALER INTEGRATION

The Sea Beam™ Underwater Laser Scaler gives a reference to estimate the size of points of interests. It adds perspective when viewing underwater objects like fishes, reefs, structures, cracks, bolts, locks, corrosion patches...

The SB20 Sea Beam™ is a dualpowered system using two laser beams spaced 75mm that will shine either two dots or two lines onto a underwater surface or feature.

Ref. **LASSB-010**

SUBSEA GRIPPER INTEGRATION

Use this attachment to retrieve objects, attach retrieval lines or release a hooked lanyard. The gripper can be opened/close from the Seasam Control App.

Supply Voltage	(volts)	9 / 18
Grip Force	(N)	97
Time to Open/Close	(sec)	1.6
Push-rod Axial Load Rating	(kg)	2.5

Ref. **GRIPR-001**

INTEGRATION OF CYGNUS ULTRASOUND THICKNESS GAUGE

Get valuable information on thickness of your metal underwater equipment.
Requires the Seasam Sensor Hub as well as a Cygnus gauge.

Ref. **CHTKG-001**

SENSORS STRUCTURE

Clip this external structure on top of Seasam drone to carry your sensor/ancillary/payload of choice underwater: additional cameras, probes, lights, etc...

Ref. **STRUC-001**

SEASAM
SENSOR HUB

The **Seasam Sensor Hub™** allows you to plug additional, third party sensors to your Seasam Drone™.

The multiple push-pull connectors allows for up to **3 sensors to be plugged and interfaced** with Seasam Drone & Seasam Control. The sensors ports are:

- *USB 2.0 x 1*
- *Ethernet x 1*
- *Serial (RS 232, RS 485, IO) x 1*

Sensors must be able to receive 24V power input. A total of up to 40W can be distributed and shared by the 3 sensors ports for simultaneous use.
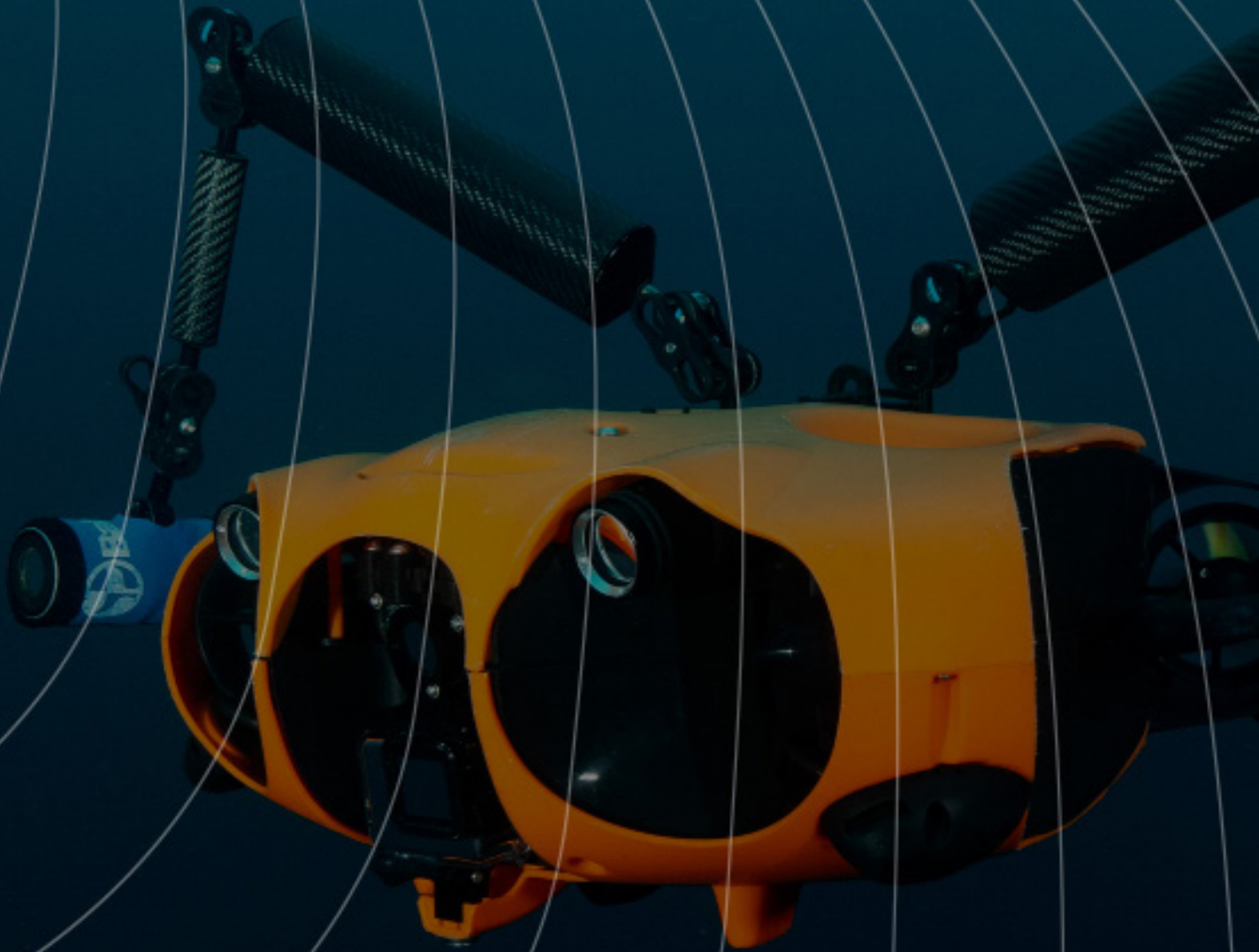
Seasam Sensor Hub™ comes with a physical support structure (see STRUC-001 on previous page) for easy third party sensor installation. Simple to install and to remove for your drone.
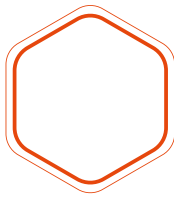
For a planned use of multiple sensors simultaneously, please contact our team.

Number of sensor inputs		3
Number of external power input		1
Compatible connectors		Fischer connectors

Ref. **SENSHUB-001**

ACCESSORIES

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AUTONOMOUS AND SUPERVISED MODES

UNDERWATER REMOTE CONTROL

ENABLES UNDERWATER TARGET TRACKING

Using its underwater remote control, the Seasam drone is able track and follow targets underwater while recording them.

Autonomous mode :"Thanks to its multiple diving profiles, such as Works or Instructor, the remote enables the drone to use different pre-programmed movement scenarios: follow, lead, 360°, … "

Supervised mode:" Combined with a Wifi-reel or Seasam Navigator (see pages 8-10), the Supervised mode allows realtime supervision of a moving tracket equipped with the Underwater Remote Control, without human intervention.

The Surface operator has control and can switch to ROV mode anytime for manual piloting. This feature is particularly useful when working with professionnal divers for remote supervision and realtime communication to the surface.
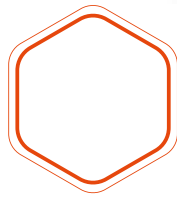
Only compatible with Seasam drone.

Depth rating	(m)	100
Charge time	(min)	120
Autonomy	(min)	120
Length of emission cable	(cm)	80
Max. signal reach	(m)	70
Max. distance from diver	(m)	20
Signal type		Acoustic
Pre-programmed scenarios		8

Ref. **APING-001**

CLICK HERE TO WATCH THE PRODUCT VIDEO

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STORAGE & TRAVEL

SOFTCASE FOR SEASAM DRONE

Softcase, custom-made for Seasam by Dimatex in a mold-proof material.

It can be carried as a backpack or can be pulled as a wheeled bag.

• Control unit
• Long handles
• Underwater remote control
• Sealing Kit
• Maintenance Kit

Not recommended for air travel.

Ref. **AHRDC-002**

LARGE SOFTCASE FOR ACCESSORIES

Mold and waterproof soft case designed to store all drone related accessories. Can be pulled as a rolling luggage.

Ref. **NAVSOF-001**

SOFTCASES PACKAGE

Softcase for transporting Seasam & its smaller accessories + Waterproof duffle bag for additional accessories.

Ref. **AHRDC-005**

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HARDCASE FOR SEASAM DRONE

Hardcase for transporting Seasam & its accessories :

• Up to 3 batteries
• Long handles
• Underwater remote control
• Sealing Kit
• Maintenance Kit
• Notilo Plus towel

Comes with custom-cut foam and an accessory container.

Can be locked with padlocks.

Case fit for air travel (odd-size check-in).

Dimensions	(cm)	81 x 52,5 x 42
Weight	(kg)	10
Lockable		Yes

Ref. **AHRDC-001**

HARDCASES PACK FOR STORAGE

Store your SEASAM and its accessories securely with this 2-in-1 hardcase package (1 large size + 1 medium size).

Ref. **AHRDC-003**

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ADDITIONAL BATTERIES & CHARGERS

ADDITIONAL M BATTERIES
PACK OF 2

Standard Lithium-Ion - 6600 mAh
Autonomy: Up to 1h30 in optimal conditions.

Recommended for light underwater operations in standard water conditions.

Power	(Wh)	95
Battery type		Li-Ion
Autonomy	(hrs)	1
Charging	(hrs)	2

Ref. **ABATT-001**

ADDITIONAL L BATTERIES
PACK OF 2

Large Lithium-Ion batteries.
Autonomy: Up to 2h30 in optimal conditions.

Recommended for inspections with 0.5 knots current strengthand up.

International transport restrictions apply, contact us.

Power	(Wh)	149
Battery type		Li-Ion
Autonomy	(hrs)	2
Charging	(hrs)	4

Ref. **ABATT-001L**

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ADDITIONAL
XL BATTERY

Extra Large Lithium-Ion battery - 28800 mAh

Autonomy: Up to 4h30 in optimal conditions.

Recommended for extensive underwater operations.

Power	(Wh)	414
Battery type		Li-Ion
Autonomy	(hrs)	6
Charging	(hrs)	6

Ref. **ABATT-0XL**

ADDITIONAL
XL BATTERY & COMPARTMENT

Extra Large Lithium-Ion battery - 28800 mAh
Includes extended battery compartment, and buoyancy adapter.

Autonomy: Up to 4h30 in optimal conditions.

Recommended for extensive underwater operations.

Power	(Wh)	414
Battery type		Li-Ion
Autonomy	(hrs)	6
Charging	(hrs)	6

Ref. **ABATT-1XL-COMP**

ADDITIONAL
BATTERY CHARGER

Used to charge M-, L- & XL-Series batteries. Lithium Ion batteries only.

Input : AC100-240 V
Output : DC16.8V-2.8A

Ref. **ACHRG-001**

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ADDITIONAL
FAST BATTERY CHARGER

Used to charge M-, L- & XL-Series
batteries. Lithium Ion batteries only.

Input : AC220-240 V
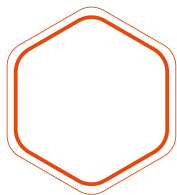Output : DC16.8V-5A

Ref. **ACHRG-002**

PREMIUM BATTERY
OPENING TOOL

Premium battery compartment
opening tool: metal, anti-slip handles,
aluminum alloy

Ref. **BATOPE-002**

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OTHER ACCESSORIES

ORION LAMPS

ORION-II 10.000 photo & video diving light with **variable lumen configuration. 90 CRI light quality**.

Mounted on flexible arms on the drone topside. Easy to set up.
Includes two lamps.

Power	lm	10000, variable
Beam angle	degrees	160
Autonomy on battery		Max power : 60 mins.
Weight of 1 lamp	g	900

Ref. **ORION-10000**

SUN VISOR FOR CONTROL TABLET

See your control unit screen even in bright conditions, with this removable sun protector for our 11" control units.

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Ref. **SUNPRO-001**

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F110 FOLDABLE TABLET KEYBOARD

The foldable and removable keyboard is compatible with the GETAC Rugged 11" control unit.

Ref. **KEYBOA-001**

BATCH OF 3 PROPELLER PROTECTION CLIPS

With these **clips**, your vertical axis propellers are **protected** from the aspiration of small stones when **Seasam** navigates close to the bottom.

Note: protection clips diminish the speed performance of the covered propeller by approximatively 25%.
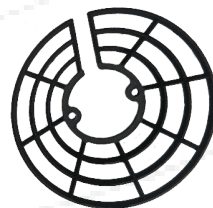

x3

Ref. **PROTEC-001**

BATCH OF 7 PROPELLER PROTECTION CLIPS

With these **clips**, your vertical axis propellers are **protected** from the aspiration of small stones when **Seasam** navigates close to the bottom.

x7

Ref. **PROTEC-002**

SOFT POUCH

Waterproof soft case for battery protection and small accessories

Ref. **SFTPCH-001**

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1:1 SCALE REPLICA

1:1 scale replica of Seasam drone, Seasam HullScan drone, or Seasam Navigator.

For exhibition purposes. Not functional.

Ref. **DUMM-001**

ORANGE COLORED HULL SET

Spare orange hull set for **Seasam Underwater Drone™.**

Ref. **COLCAS-00O**

BLACK COLORED HULL SET

Spare black hull set for **Seasam Underwater Drone™.**

Ref. **COLCAS-00M**

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SUPPORT
PLANS

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Notilo Plus works with organisations of various sizes and capabilities, requiring different degrees of technical involvement and autonomy.

Discover below our support options to find the most suitable for your needs.

	STANDARD SUPPORT	SELF-MAINTENANCE	notilo care	
Online support	Office opening hours (CEST, 5/7)	Office opening hours (CEST, 5/7)	Office opening hours (CEST, 5/7)	Office opening hours (CEST, 5/7)
Priority hotline with live video assistance			✓	✓
Maintenance check-up (yearly or every 200 hours)	On-demand		✓ 1/year included	✓ 1/year included
Self-maintenance training, e-book & videos		✓		
Replacement parts & toolbox		✓		
Yearly coverage for Parts & repair			1000€	3000€
Return shipment post-repair / maintenance			✓ Standard shipping	✓ Express shipping
Courtesy drone (in case of blocking issue > 7 days)				✓

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STANDARD SUPPORT

Get access to articles, help and advices for getting the most of your Seasam.

Our support team will reply to your questions Monday to Friday, 9.00 to 5.00pm, AEDT - 1300 721 990

Most incoming requests we get are actually due to usage difficulties, and are sorted rapidly by consulting our user manuals or our online FAQ, but our team will stand by your side nonetheless: simply send us an email at support@edgerov.com.au describing your problem.

- *User guides*
- *User tutorial videos*
- *Online FAQ*
- *Email support 8/5 AEDT*
- *Safety tips*
- *Documentation*

Just like with any complex system, proper care, coupled with a regular maintenance schedule ensures your product lifespan is optimised. Therefore we recommend a check-up once a year or every 200 hours of operation.

SELF MAINTENANCE

LEVEL 1 MAINTENANCE & REPAIR TRAINING

Maintenance focused training (0.5 day in France at Notilo Plus site in Lyon or Marseille for up to 3 persons max)

Ref. **TRAING-002**

• SPARE PARTS AND MAINTENANCE KIT

A range of common sparts for your Seasam, for easy replacement by yourself or your nearest Service Center.

Kit contents	
Spare propeller	1
Spare hydrophone	1
Spare remote emitter	1
Sealing joints	3
Spare screws	16
Spare propeller blades	7
Silicon grease	1
Drone weights	2
Spare drone light	1

Ref. **REPRK-001**

• DRONE REPAIR TOOL KIT

With this repair tool kit and maintenance training, be ready to perform almost all replacement on your Seasam.

Kit contents
Long TORX T10 bit
Long TORX T25 bit
Hex key T2
Screwdriver
Flat Screwdriver
Dynamometric key
Needle, Resin & Resing gun

Advanced training mandatory required for self-maintenance (see next page)

Ref. **REPAR-001**

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