

# CAT-Surveyor<sup>USV</sup>



Range 2km



2 electrical motors



12h autonomy



Payload 80kg



## SUBSEA TECH

Marine and Underwater Technologies

## The CAT-Surveyor USV

is an Unmanned Surface Vehicle, catamaran type, with tele-operated and/or autonomous modes for hydrographic data acquisition or surveillance of underwater zones in harbours, costal areas and inland waters.

Thanks to its open architecture and its high speed PC to PC communication, all kinds of sensors running on Windows can be easily integrated to the CAT-Surveyor. The shore control PC allows real time display and control of navigation and onboard sensors.



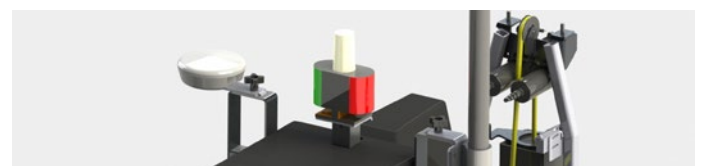
### ON BOARD ELECTRONICS

Thanks to the open architecture of the on board PC, the CAT-Surveyor can embed various sensors such as sonars, echosounders and ADCP



### BATTERIES

Two LI-Ion accumulators integrated in the hulls give a full energy autonomy to the CAT-Surveyor allowing up to 12h missions in the most remote areas.



### NAVIGATION

CAT-Surveyor is equipped with 2 full HD color video cameras, 2 outboard electrical motors, GPS positioning, high speed Wifi communication up to 2km range and automatic navigation mode.

# TECHNICAL SPECIFICATIONS

## MAIN FEATURES

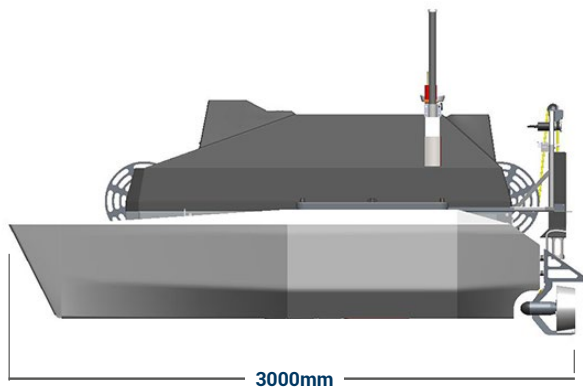
<b>Control</b>	Remote control through Wifi 5GHz (back-up radio link 2,4GHz)
<b>Dimensions</b>	L 3m x b1,6m x H 1,2m (without antenna)
<b>Weight</b>	270kg without payload
<b>Payload</b>	80kg
<b>Max. speed</b>	5 knots
<b>Draft</b>	36cm, 48cm with 80kg payload
<b>Max. wave height</b>	1m
<b>Max.current speed</b>	2m/s

## SYSTEM CONTROL

<b>Operator interface</b>	Laptop PC + joystick box + auto navigation modes
<b>Communication</b>	WiFi 5GHz range > 2km, back-up radio link 2,4GHz
<b>Navigation sensors</b>	2 full HD color video cameras, DGPS (RTK in option), INS, Compass
<b>Sensor data display</b>	Video/sonar images display on control PC
<b>Position display</b>	Position and trajectory display on all types of maps
<b>On board electronics</b>	PC fanless Intel Core i7 + 5V/12V/24V power in IP67 case
<b>Sensor data interfaces</b>	Serial, USB, Ethernet, others on demand
<b>Auto navigation</b>	Automated navigation software (pre-programmed trajectories)

## PACKAGING

<b>Transport</b>	On a trailer, in a container or on a pallet
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## PROPULSION AND POWER SUPPLY

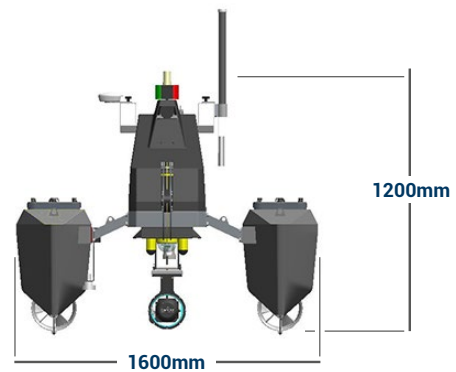
<b>Propulseurs</b>	2 outboard electrical motors (2x500W / 24VDC)
<b>Batteries</b>	Li-Ion Accumulators, 12h autonomy, charge level displayed on control PC, easily swappable
<b>Alimentation</b>	AC 110-220V to recharge the batteries

## MAINTENANCE AND WARRANTY

<b>Documentation</b>	Operator manual, soft and hard versions
<b>Maintenance</b>	No specific maintenance required
<b>Warranty</b>	1 year, man-hours and parts, excl. transport costs


## OPTIONS

<b>Winches</b>	Front dipping winch for deployment of mini-ROV and physico-chemical gauges Rear winch for towed sensors (cameras, side scan sonar, magnetometer)
<b>Mini-ROV</b>	Portable underwater inspection robot Subsea Tech Observer
<b>Retractable frame</b>	Mounting device under the USV for sensor deployment (sonars, echosounders)
<b>Single beam bathymetry</b>	Airmar Smart SS510 echosounder, 235kHz, range 0,5-100m, resolution 3cm
<b>Multibeam bathymetry</b>	Norbit WBMS echosounder + INS + GPS RTK + SVP + QUINSy
<b>Side scan sonar</b>	Starfish 450kHz/990kHz
<b>Imaging sonar</b>	Teledyne BlueView M series or BluePrint Oculus
<b>3D LIDAR</b>	Norbit iLiDAR or VLP-16 «PUCK»
<b>Current profiling</b>	ADCP Sontek, Flowquest or Teledyne RDI
<b>Batteries</b>	Additional battery packs as spare parts



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