USV200

SINGLE OR MULTIBEAM

Autonomous bathymetry

Performance & Polyvalence

Hydrojet propulsion and multibeam depth sounder integrated «flush» into the hull

Suitable for port areas, inland waters, lakes, rivers... and for very shallow areas (15 cm draught)

Full day operation (2 knots, up to 10 knots (5 m/s))

100% automated bathymetry, Compact and space-saving

Multibeam system

Multibeam soundeur R2SONIC 2020

GNSS RTK inertial control, positioning and compasses

Hull celeritometer, Navigation and acquisition software : Hypack (HYSWEEP®) and QINSy

Multi-applications

Conventional and specific bathymetric surveys
Ideal for surveys of inland waters, ports, rivers...

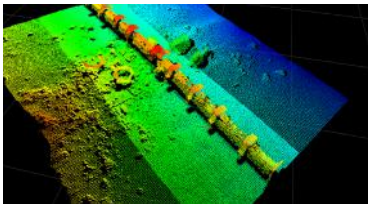
Navigation safety, Dredging Control

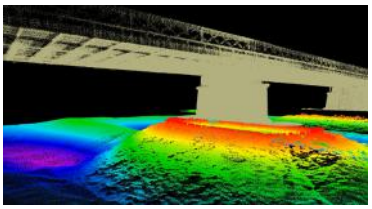
The USV200 is a compact, powerful and robust solution.

With the multibeam echo sounder and propulsion integrated directly into the hull, the USV can safely operate in a very wide range of environments, such as in the middle of shallow areas or areas with complicated access.

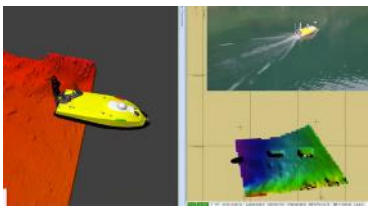
GEOD® Parc du Petit Chatelier, 359 route de Sainte Luce, 44300 Nantes | FRANCE | info@cadden.fr | +33 (0)251 824 646 | **geodproducts.com**

Multibeam bathymetric surveys and inspections

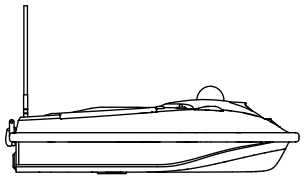




Mechanically fixed electric winch



Equipped with a shell to protect the probe and cable during deployment



Standards delivery

1 USV
1 rechargeable battery
1 wireless base station
1 remote controller
1 single-beam system or 1 multi-beam system with hull celerometer
1 Inertial control, GNSS RTK compass
1 transit case on wheels
1 360° Camera
1 Collision avoidance system
Drone navigation software and autopilot

Optionnels delivery

Additional batteries
Oceanographic winch with SVP or multi parameter probe
Laser scanner
Launching trolley
R2SONIC modes: UHR 700 Khz, Truepix, Water column data
PC Portable Rugged Terrain

*Other configurations available on request
**Vacuum, without echosounder or inertial sensor

Technical characteristics

Inertial control positioning	Inertial control FOG or MEMS Multiconstellation GNSS, Beidou, Galileo Multi-fréquency, RTK
Sounding*	Single beam : 200 kHz (SF & DF), 30 kHz (DF). Multi beam : R2Sonic, Kongsberg, Norbit ...
• **Example : R2SONIC 2020* 200 to 400 Khz (700 Khz option)**	Adjustable frequency from 200 to 400 kHz and 700kHz High resolution : 2°x2° @400kHz,1°x1° @700kHz Opening 10 to 130°, range 75m+ nadir
• **Hull celerometer**	
Communication	GSM Long-range UHF (403-473MHz) Wifi (2.4GHz)
User interface	Full system configuration Mission planning Real time navigation Real time Survey setup and tracking
Other sensors	Oceanographic Winch (SVP, multisensors) Scanner Laser
	Shore Based Control Post

USV characteristics**

Hull material	Carbon fiber
Dimensions	160 x 70 x 40cm
Weight	32 kg
Draft	20 cm
Engine	2 hydrojets
Speed	5 m/s max.
Autonomy (vitesse 1 m/s)	From 10h to 12h
Remote controller range	1 km
Wireless base station range	2 km

Winch characteristics*

Winch and power management	
• **Embedded web user interface**	Display of total current consumption, controlled on/off and output naming
• **Data output**	RS232
• **4 distinct power supply zones**	Zones 33 VDC, A, B, C
Probe deployment system	
• **Probe type**	AML Oceanographic SVP AML-3 probe
• **Load**	135 m braid length with 68 kg breaking load*
• **Storage**	Passive and secure storage of the probe on board the USV
• **Deployment**	Overboard and automatic recovery, measurement of the unwound length
• **Profiling**	Manual, automatic, RS232 data output