USV100

Autonomous bathymetry

Simple and easy bathymetric survey

Hydrojet propulsion up to 10 knots
Long-term autonomy
Versatile and suitable for all conditions environmental

GEOD® powered

Manual and / or autonomous bathymetry
Real-time centimeter accuracy RTK
Integrated web server compatible with many software
Single Frequency (SF) and Dual Frequency (DF)
Connected (UHF, GSM, Wifi), BALI software, Hypack, QPS...

Robust and lightweight

One surveyor can operate it
Ultra-resistant carbon fiber hull
Ideal for surveys of inland waters, ports, rivers...

The USV100 is a complete bathymetric survey solution, which is simple to operate and extremely accurate.

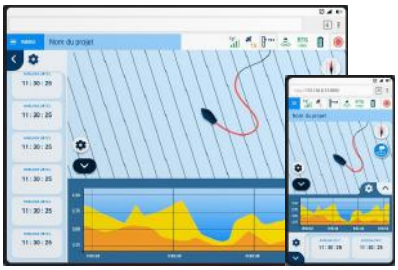
It comes with either a single frequency (SF) or a dual frequency (DF) echosounder for sounding up to 200 m with centrimetric accuracy.

USVl00's structure is made with fiber carbon which makes it easy to carry, deploy and operate by only one operator. Robust and compact, USV100 can be used in any environnemental and hydrological conditions.

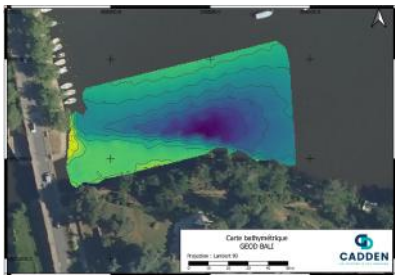
GEOD Parc du Petit Chatelier, 359 route de Sainte Luce, 44300 Nantes | FRANCE | info@cadden.fr | +33 (0)251 824 646 I **cadden.fr**

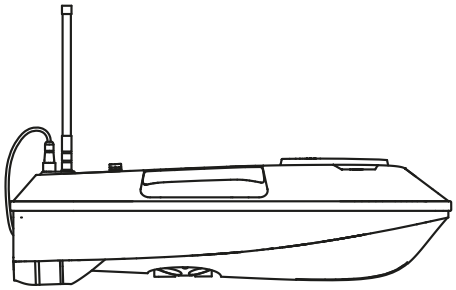
Integrated Webserver

- Line tracking, map background integration, waypoint creation, etc.
- Wifi connection with smartphone, tablet or PC
- Remote maintenance and updates



Single beam bathymetric surveys





Technical characteristics	
Positioning	GPS, Glonass, Galileo and BeiDou dual-frequency RTK (1cm) - SBAS (0.5m)
Sounding*	
• **450kHz frequency**	Range : 0,15m - 100m Accuracy : 0,2% of depth range or 2 cm Angle beam : 5°
• **200kHz frequency**	Range : 0,4m - 200m Accuracy : 0,2% of depth range or 2 cm Angle beam : 9°
• **30kHz frequency**	Range : 0,4m - 200m Accuracy : 0,2% of depth range or 2 cm Angle beam : 26°
Radio communication	GSM Long-range UHF (403-473MHz) Wifi (2.4GHz)
I/O interface	Full system configuration Mission planning Real time monitoring Real time navigation Bathymetric data cleaning
Data format	
• **Position**	Latitude, Longitude, Altitude (WGS84) and XYZ
• **Sounding**	Water depth (meter)
Data output	NMEA0183 and ASCII
Software interface	Web browser (iOS, Android, Windows)

USV characteristics**	
Hull material	Carbon fiber
Dimensions	105 x 55 x 38 cm
Weight	17 kg
Draft	15 cm
Engine	2 hydrojets
Speed	5m/s max.
Autonomy (vitesse 1 m/s)	From 10h to 12h
Remot controller range	1 km
Wireless base station range	2 km

Standard delivery

1 USV
1 rechargeable battery with charger
1 wireless base station
1 remote controller
1 BALI (smart antenna + echosounder)
1 PTZ camera
Navigation and autopilot software
1 transit case on wheels

Optional delivery

Additional batteries
BALI stand-alone assembly kit
ADCP, sonar side scan, ...

Easy to carry

Compact

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