

# EPULSE

**Underwater detection, classification, localisation (DCL)**

**Real-time electric impedance seabed imaging**

**Centimetric spatial resolution: “Super-Classification”**

EPULSE is the world’s unique compact, plug&play, active/passive electric sensor product line based on the ‘active electrolocation’ patented technology CEDAR (*Controlled Electric Detection And Ranging*).

Available as **Tetrapulse (4 electrodes)** or **Octopulse (8 electrodes)**



TETRAPULSE  
1000m depth rated



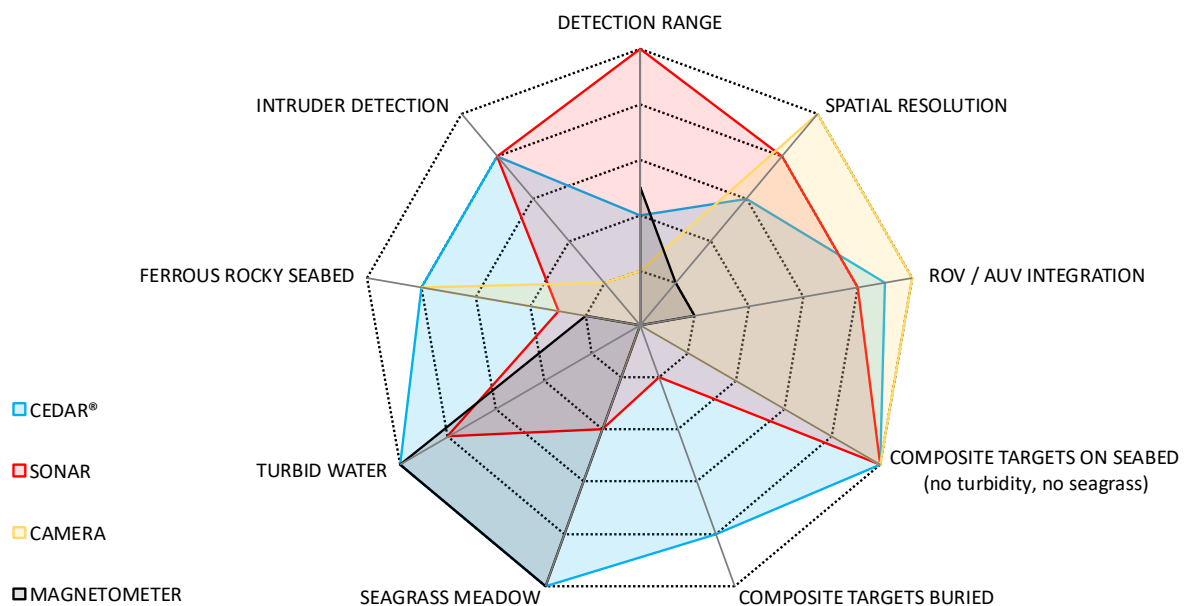
OCTOPULSE  
6000m depth rated

## APPLICATIONS

- Mine warfare
- Underwater Intruder detection
- Cable and pipeline surveillance
- UXO survey
- Environmental survey
- Oceanographic survey
- Marine archeology
- Buried OBN localization
- Seabed minerals

## CEDAR® TECHNOLOGY BENEFITS

- Real-time detection and characterization of any metallic and non-metallic of bottom and buried
- Highly efficient in complex environments in which video and acoustic are inefficient: turbid water, rocky seabed, seagrass meadow, noisy acoustic environment, lakes, rivers, ...
- Integration onto any infrastructure and vehicles (AUV, ROV, ROTV, crawler...)
- OWLIA software interface for real-time seabed complex electrical impedance mapping (phase and amplitude anomalies)



## TECHNICAL SPECIFICATIONS

Array configuration	2 to 8 electrodes
Operational frequency range	10Hz-5kHz
Maximum emitted signal	4 Amps

## MECHANICAL SPECIFICATIONS

	1000m	6000m
Material	Aluminium	Titanium
POD dimensions	250mm * Ø115mm	455mm * Ø143mm
POD weight in air / water	3.7Kg / 1 Kg	12.6Kg / 7.1 Kg
Electrode weight in air / water	0.85Kg / 0.35Kg	1.4Kg / 0.8Kg
Electrode dimensions	113mm * Ø90mm	
POD to electrode cable length options	1.5 to 7m on demand	
Electrode's connectors options (all SubConn)	Straight or right angle	

## INTERFACES SPECIFICATIONS

Ethernet	10/100/1000 Mbits, UDP/TCP (client / server)
Ctrl/Cmd	MINI1 protocol
Maximum data acquisition rate	100Hz
Real time data output	NMEA UDP for 3 <sup>rd</sup> party georeferenced data visualisation
Internal data storage	64 GB
Power supply / peak consumption	20 - 48 VDC / 120 W

