



ELWAVE

ELECTRIC IMAGING
DETECTION
NAVIGATION

Subsea
electromagnetic

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ELWAVE BRINGS A NEW SENSE IN SUBSEA OPERATIONS, THE ELECTRIC SENSE.

- INSPIRED BY NATURE**
Some fish can perceive their environment through electric fields, even in murky, complex waters. This remarkable biological sense — used for navigation, hunting, and obstacle avoidance — has inspired a new approach to subsea sensing.
- OUR MISSION**
ELWAVE transforms this natural ability into powerful new technologies for the underwater world. We develop bio-inspired electric sensors that detect and classify objects on the seabed and in the water column. This "electric sense" adds a new dimension to subsea perception, beyond acoustics, magnetic and optics.
- FROM SCIENCE TO SYSTEM**
Our expertise spans the entire development chain: electric sensing, electronics, signal processing, mechanics, and software. All ELWAVE systems are designed and built in-house, enabling us to deliver both standard products and tailored, mission-specific solutions.

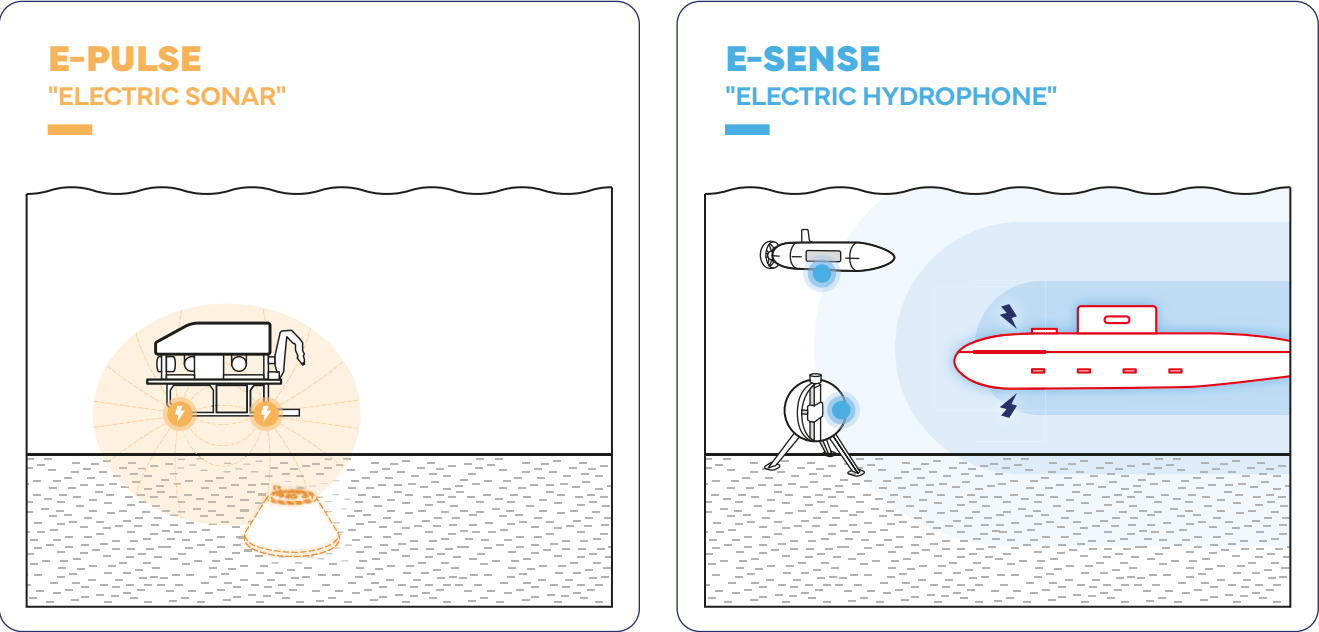


ELWAVE IS SENSING
WHAT OTHERS MISS.



BIO-INSPIRED SENSING: ACTIVE AND PASSIVE ELECTRIC PERCEPTION.

ELWAVE offers a complete suite of subsea electric field sensors: **Active electric (E-PULSE):** generate an electric field around itself, any object with a different impedance will modify the field and thus be detected. **Passive electric (E-SENSE):** measures surrounding electric activity



- RELIABILITY**
Solid-state, no moving parts, titanium electrodes, ...
- STEALTH**
No acoustic emission
- ELECTROMAGNETIC COMPATIBILITY (EMC)**
Low emitted EMF & no interference with external sensors

OUR PRODUCTS

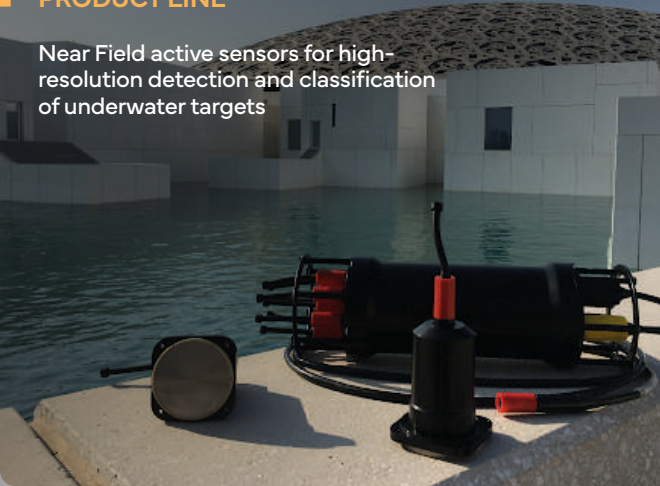
SENSORS

E-PULSE

PRODUCT LINE

ACTIVE

Near Field active sensors for high-resolution detection and classification of underwater targets



FEATURES AND BENEFITS:

4 to 8 electrodes

Detects all material (metallic, plastic...) in all conditions (buried, no visibility...)

Super-classification: target size, localization and electric impedance

Real time impedance mapping with centimetric resolution

Free export

300m and 6000m depth rated

E-SENSE

PRODUCT LINE

PASSIVE

Ultra-sensitive subsea electrometer for passive detection, environmental monitoring, and wideband signal analysis



FEATURES AND BENEFITS:

1 to 3 axis

Ultra-high sensitivity (picoV/m)

Wideband: DC to 4000 Hz

Long range (AUV > 150m)

Self-calibration

Solid state titanium electrode (no chemical compound)

Low energy consumption (<1,5W for 3-axis)

Fast wake up time (<0,5s)

3rd party input (Mag & Hydrophone)

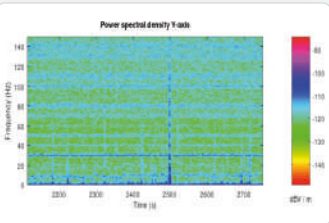
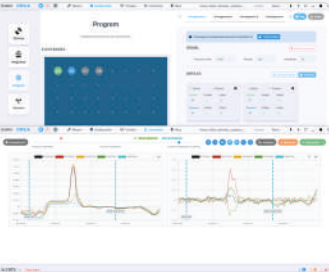
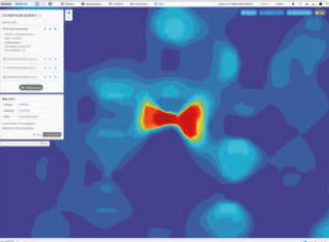
Dual use

300m and 6000m depth rated

SOFTWARE

OWLIA SOFTWARE

Owlia offers a common interface for a complete user experience, from sensor setup, to data visualisation and analysis and export.



OUTPUT

E-PULSE FROM INTEGRATION TO RESULTS



E-SENSE FROM INTEGRATION TO RESULTS



APPLICATIONS

