NemoSens

Micro Autonomous Underwater Vehicle

Acoustic Monitoring	*Seabed Imagery*	*Environmental Monitoring*	*Rapid Environment Assessment*

Description

NemoSens is a compact autonomous underwater vehicle designed for applications in the fields of Industry and Science.

NemoSens is a cost-effective operational micro-AUV (Autonomous Underwater Vehicle).

A system of acoustic communication manages the control of its real-time positioning.

Mission coverage can be extended thanks to swarm technology and possibility to deploy multiples AUV.

Software functions and measurement sensors (within a 2-kg limit) can be added on demand.

An open architecture makes it possible to evolve the drone and to answer the different requirements.

Advantages

- **Micro-AUV (Less than 1 m length)**

- **Cost effective**

- **Easy to deploy, recover and maintain**

- **Open architecture LINUX**

- **Several measurement sensors available**

Payloads & Options

- **Side Scan Sonar**
- **CTD**
- **O2, T°c, hydrocarbon sensors**
- **Magnetometer**
- **Multi-parameters sensor**
- **Camera**

Supplied Hardware

- **GEOsys**
- **GPS**
- **INS**

V.008

GEOsys system

Side Scan Sonar

CTD sensor

Side Scan Sonar

- 450 kHz nominal (430 kHz – 470CHIRP)
- 0.5° horizontal beam width for high resolution imagining
- 60° vertical beam width (Beam angles @ - 3 dB)
- Sonar:
  - Swath 1 m to 100 m (3 ft to 320 ft) per side
  - Sonar swath 2 m to 200 m (6 ft to 640 ft)

Water parameter sensors

NemoSens has been designed to be easily deployed and recovered from a small boat by only one person.

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GEOsys

UHF Modem for recovery.

Integrated sensors

Integrated sensors depending on applications range from SSS to magnetometer.
Pinger, Long Rang UHF modem and strobe light for emergency recovery.

Open and flexible plateform

Nemosens is an open and flexible system, with a Linux operating system for user software implementation, it is an ideal plateform for a wide variety of development needs.

Focus swarm mode

Up to 7 micro-AUVs can operate and communicate together in swarm mode.

Navigation capacities

- **Depth : down to 300 m**
- **Speed : 2 to 8 knots**
- **Autonomy : Up to 8 hours**

Dimensions

- **Length : 960 mm**
- **Diameter : 124 mm**
- **Weight : < 10 kg**

V.008

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RTSYS – Underwater Acoustics – AUV – Diver Held Sonar & Navigation – Defence System