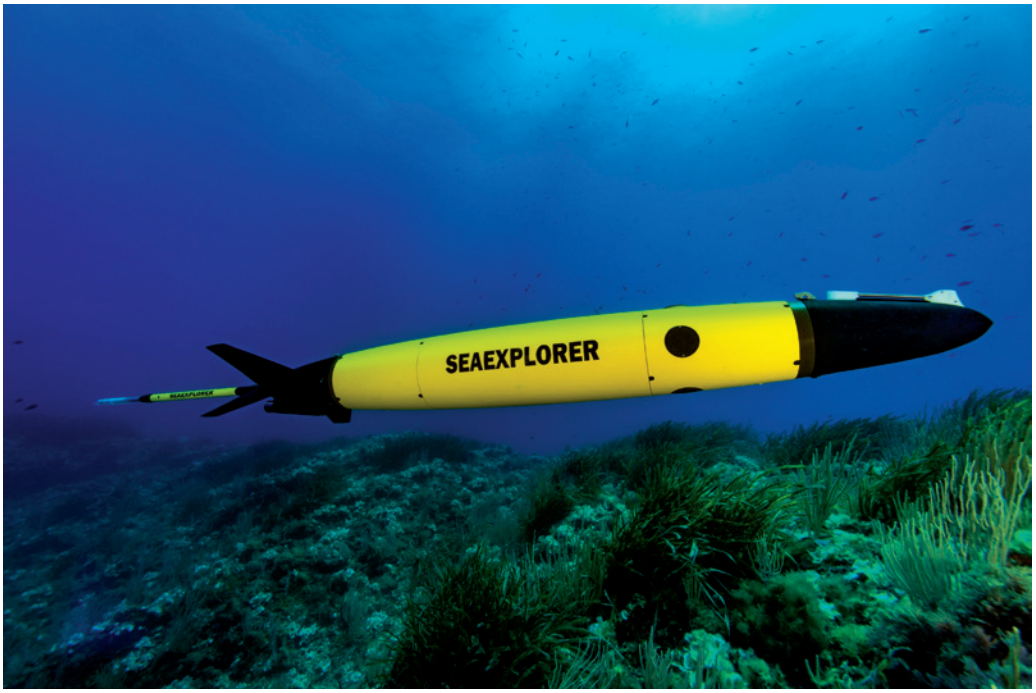
ALSEAMAR
ALCEN

SEAEXPLORER X2

Multi-mission underwater glider



- Monitoring
- Data collection
- Detection
- Acoustic recording

APPLICATION FIELDS

Marine Science & Environment
Oceanographic Research & Monitoring

Oil & Gas
Exploration & Environmental Baseline Studies

Defense & Security
REA, Acoustic Intelligence & ASW

innovation & services at sea

KEY BENEFITS

Rechargeable Batteries

Substantial savings in money and time together with low logistics requirements.

Easily Interchangeable Payloads

Large modular sections (9 L / 8 kg) with no need to re-open and re-ballast the vehicle, leading to a great easiness of use and lowering workshop operations.

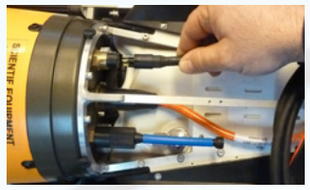
Large Ballast

Fitted with the largest ballast (1,000 cc) to face high density gradients and strong currents (providing high speed & maneuverability).

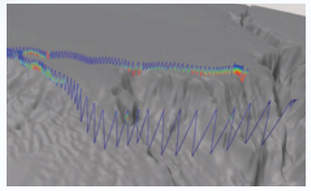
Robust wingless design

No external moving parts, lowering the risk of breaks and damages (especially during deployment and recovery).

Fast & easy payload change



External Recharging & Ethernet connectors



3D-mapping of collected data

GENERAL PRINCIPLE

The SEAEXPLORER underwater glider is a powerful autonomous sensing platform designed for persistent ocean monitoring and exploration. It provides near real-time water column data profiles at a large ocean scale.

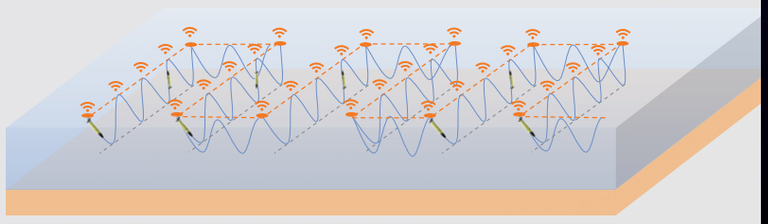
Driven by buoyancy changes, the vehicle silently glides up and down the water column while collecting physical, chemical, biological and/or acoustic data, depending on the sensor configuration.

A user-friendly software suite allows constant supervision and mission control from any place in the world. The SEAEXPLORER regularly surfaces to send ashore its GPS position, collected data and receive new mission commands via Iridium telemetry.

The SEAEXPLORER glider is a very cost-effective solution for data collection: it requires no supervising boat at surface during its mission, reducing reliance on large vessels with high daily costs. The SEAEXPLORER is easy to operate and has been designed for both shallow and deepwater operations.

Onshore pilot

Two-way satellite communication:
- real time data collection
- mission update



SPECIFICATIONS

WEIGHT AND DIMENSIONS

Body Size (D x L)	0.25 m × 2 m + 1 m foldable antenna
Wingspan	56.5 cm Wingless design
Weight	59 kg in air

VEHICLE FEATURES

Communications	GPS / Satellite (Iridium) / Radio – Triple antenna
Navigation Mode	Survey / Virtual mooring / Drifting / Bottoming
Safety	Autonomous drop-weight & Strobe light Optional: Locator Pinger (ULB) and/or Argos
Architecture	2 independent CPUs (Linux) for Payload & Navigation

OPERATIONAL CAPABILITIES

Depth Rating	1,000 m
Ballast Volume	1,000 cc (± 500 ml)
Speed	Nominal 0.5 kt / Maximum 1 kt
Battery	Rechargeable Li-ion
Typical Range (Endurance)*	1,700 km (110 days) With a CTD, DO and Fluorometer

* Range and Endurance largely depend on sensors, sampling strategy and mission environment

PAYLOAD & SENSORS

General Features	Up to 6 sensors in two sections (wet & dry): 9 L / 8 kg Altimeter API for sensor integration by the end-user Compressed CSV (native) Data downloading through external Ethernet cable (no vehicle opening)
Standard Sensors	CTD (pumped) Dissolved Oxygen (Optode or Electrochemical) Chlorophyll / Turbidity / CDOM ADCP Fluorometers options (Puck) Lab-On-Chip Underwater Vision Profiler
Exclusive Sensors	Hydrocarbons / Sewage / Pesticides µTurbulence Methane Passive Acoustic Recorder up to 8 channels (customizable)
On-demand Sensors	Metal traces & Micronutrients Nitrates PAR pCO_2 Echo sounder Others upon request

BRIDGES
BRINGING TOGETHER RESEARCH AND INDUSTRY FOR THE DEVELOPMENT OF GLIDER ENVIRONMENTAL SERVICES

ALSEAMAR has been funded by EU to develop ultra-deep gliders for 2,500 m and 6,000 m depth. Find out more about the BRIDGES project on www.bridges-h2020.eu

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