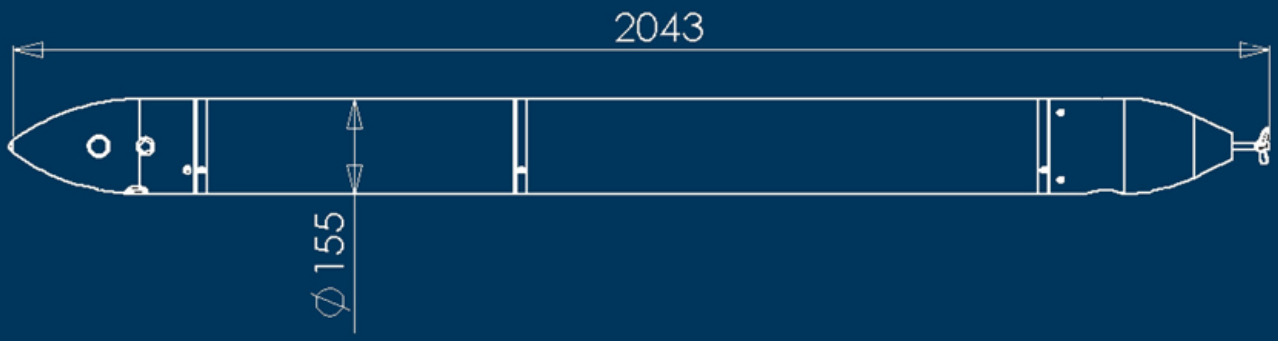
folaga AUV

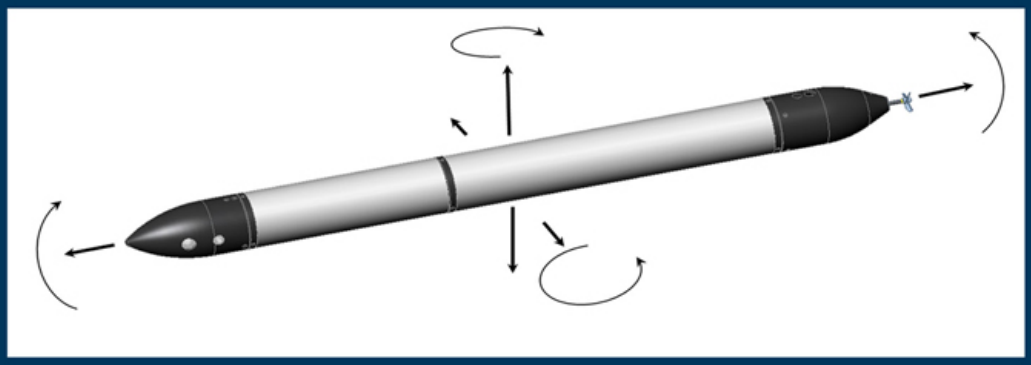
Low cost platform
Surface Navigation Capability
pitch/yaw control by hydro-jet
buoyancy change (glider)
Transportable by car
Payload Versatility
High maneuverability and Hovering
Surface Communications
Designed for cluster work



Diameter 155 mm
Length from 2000 mm
Weight in air 31 kg
Energy Storage: NiMh Batteries 12 Volt 45 Ah
Speed 2 knots (up to 4 knots if required)
Control pitch/yaw thruster, movable ballast, active buoyancy control
Endurance 6 hours at max speed
Maneuverability any bearing and trim with no active surfaces
Gliding Scope 0 – 50 m
Max depth 80 m (underwater navigation)
Software Windows Command and control interface
Communication 2.4 GHz radio Link when surface

Application

Originally designed for applications related with environmental monitoring, the current version, with its renewed design, allows also missions concerning inspection and security activities, thanks to its greater manoeuvrability, empowered operative autonomy, and ease of integration of different kinds of payload modules



Mobility

One of the main distinctive feature of FOLAGA is its high maneuverability, making it a hybrid vehicle, characterized by actuation mechanisms that are similar to those of oceanographic gliders and of self-propelled AUVs, together with hovering capability typical of ROVs.

The motion in the surge direction is obtained through propulsion jet-pumps at the vehicle stern, while steering in the surge–sway plane is obtained through two jet-pumps at the vehicle bow. Vehicle diving is obtained by a combination of buoyancy and attitude change. Buoyancy is controlled through a ballast chamber in which water can be injected or ejected, while attitude is controlled through the internal displacement of the battery pack. The combined use of buoyancy and attitude change allows the vehicles to dive in different ways: from vertical dive with 0° pitch (oceanographic data profiling), to combined attitude change and surge propulsion (keeping the vehicle neutrally buoyant), to combined attitude and buoyancy change (with or without propulsion).

Mission payload

FOLAGA can host different kind of sensors and the integration of a mission payload is very simple and effective thanks to the vehicle modular design. The hull is indeed constituted by two independent modules, each one neutrally buoyant and balanced, which can be opened for hosting any custom or COTS device, once encapsulated in additional neutral and balanced payload modules.

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