



# ROAZ II

AUTONOMOUS  
SURFACE  
VEHICLE



**INESCTEC**  
TECHNOLOGY & SCIENCE



# ROAZ II

## AUTONOMOUS SURFACE VEHICLE

ROAZ II is an autonomous surface vehicle designed for aquatic environment monitoring, bathymetry, data collection and oceanography, security and search and rescue missions. With on-board sensor processing and high precision navigation it is capable of operating autonomously in the ocean environment. The robot has a wide range of sensors and advanced on-board controls allowing its use in efficient precision environmental modelling (oceanographic, 3D sea floor modelling), automated intrusion detection, target tracking, identification, area patrol, communications relay in multi-vehicle scenarios and surface support to underwater assets.

On-board ROV in coordinated missions makes it a suitable surface platform for underwater inspection and data collection tasks.

This vehicle has already taken part in various operational missions.

### MAIN FEATURES

Autonomous operation

GPS with RTK and INS for precise positioning

RADAR for obstacle detection

Infra-red and visible light cameras

On-board image processing

Wireless communication (data/video)

CTD

Multi-beam sonar and side-scan sonar

LiFePO4 Batteries

On-board inspection ROV (remotely operated Vehicle)

### SPECIFICATIONS

Length: 4.25 m // Width: 2 m // Weight: 250 kg

Maximum speed: 10 knots

Autonomy: 11 hours

Electric propulsion: 10 HP

Load capacity: 500 kg



**INESCTEC**  
TECHNOLOGY & SCIENCE  
ASSOCIATE LABORATORY  
PORTUGAL

CAMPUS DA FEUP  
R DR. ROBERTO FRIAS 378  
4200 - 465 PORTO  
PORTUGAL

T +351 222 094 000  
F +351 222 094 050  
[www@inescporto.pt](mailto:www@inescporto.pt)  
[www.inescporto.pt](http://www.inescporto.pt)



QUADRO  
DE REFERÊNCIA  
ESTRATÉGICO  
NACIONAL  
PORTUGAL 2007-2013



UNIAO EUROPEIA  
Fundo Europeu  
de Desenvolvimento Regional



Fundação para a Ciência e a Tecnologia  
membro da associação robótica