

Low Logistics | One Man Portable | Robust & Reliable | Modular Design | Open System | Affordable

The LAUV is an Autonomous Underwater Vehicle targeted at innovative standalone or networked operations for cost-effective oceanographic, hydrographic and security and surveillance surveys. The LAUV is a lightweight, one-man-portable vehicle that can be easily launched, operated and recovered with a minimal operational setup. The operation of the LAUV does not require extensive operator's training. The LAUV is an affordable, highly operational and effective surveying tool. The LAUV successfully operated in lakes, estuaries, harbors and at sea all over the world. The LAUV system was developed by the Laboratório de Sistemas e Tecnologia Subaquática from the University of Porto, one of the leading underwater robotics laboratories in Europe and has been further developed in cooperation with OceanScan.



LAUV Basic Configuration

Dimensions: L110 x D15 cm

Weight: 15 kg

Maximum Depth: 100 m

Endurance: up to 8 hours @ 3 knots

Speed: up to 4 knots

Wireless Communications: WiFi, GSM/HSDPA

Navigation: GPS, Compass, Depth Sensor



SECURITY & SURVEILLANCE



APPLICATIONS

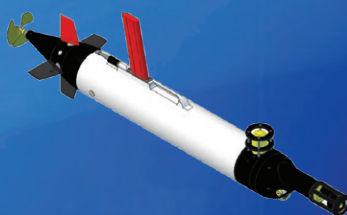
Underwater Surveillance
Mine Counter Measures (MCM)
Rapid Environmental Assessment (REA)
Anti Submarine Warfare (ASW) Training
Search and Recovery (SAR)
Port Security

TYPICAL OPTIONS

Acoustic Modem
Side-Scan Sonar
Digital Camera + LEDs
Doppler Velocity Log (DVL)
Sound Velocity Sensor (SVS)
Forward Looking Sonar (FLS)
High Precision INS



OCEANOGRAPHY



APPLICATIONS

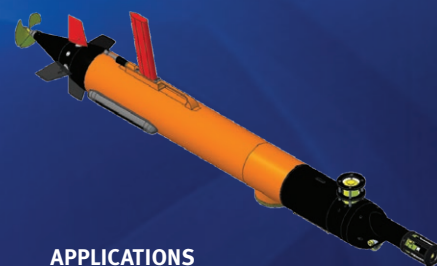
Scientific Research
Environmental Surveys
3D CTD Mapping
Emergency Response Surveys
Development Platform for Underwater Robotics
AUV Training Platform

TYPICAL OPTIONS

Acoustic Modem
CTD Sensor
Water Quality Sensors (pH, DO, etc.)
Turbidity Sensor
Scattering Sensor
Fluorescence Sensor
Single Beam Echosounder



HYDROGRAPHY

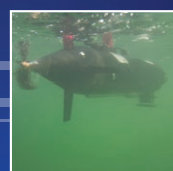
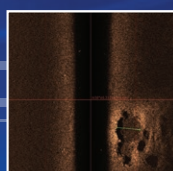
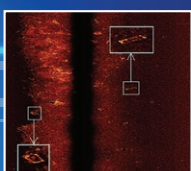
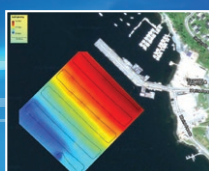


APPLICATIONS

Hydrographic Surveys
Wreck Search and Mapping
Pre/Post Dredging Monitoring
Underwater Archeology
Bottom Mapping

TYPICAL OPTIONS

Acoustic Modem
Side-Scan Sonar
Multibeam Echosounder
Doppler Velocity Log (DVL)
Sound Velocity Sensor (SVS)
Forward Looking Sonar (FLS)
High Precision INS
Long Base Line (LBL)



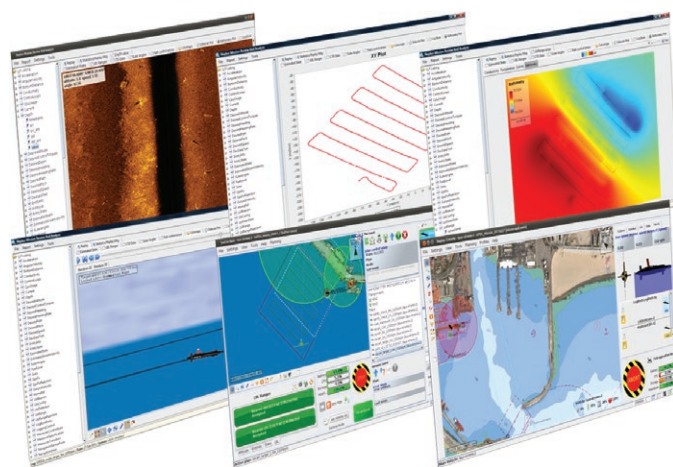
Engineering the future for a sustained presence in the ocean

OPERATOR CONSOLE

NEPTUS is the Command and Control User Interface for the LAUV operation. This complete software framework was designed to support all user's actions at the several stages of the mission life cycle:

- ✓ Vehicle's configuration
- ✓ Maps, missions and trajectories design
- ✓ Real-time monitoring of the vehicle status
- ✓ Mission control: programming, start, stop, pause, abort
- ✓ Real-time monitoring of mission execution through acoustic communications
- ✓ Post mission data retrieval and analysis through graphical representations
- ✓ Management of all mission related documents (checklists, logbooks...)

NEPTUS supports networked operations involving heterogeneous vehicles, operators and consoles.



COMMUNICATIONS GATEWAY



The Communications Gateway is a hub that supports wireless and acoustic communication to the LAUV. It allows multiple operators to control and monitor multiple vehicles in a networked environment over distinct platforms, including Android smart phones. The device is battery powered for full autonomy and portability. It comes in a rugged waterproof enclosure that allows installation in a buoy, if required.



Features

- Dimensions:** 43 x 25 x 34 cm
- Weight:** 9 Kg
- Acoustic modem:** Micro-modem (range up to 2 km)
- WiFi:** 2.4 and 5 GHz (range up to 4,5 km)
- Autonomy:** 8 hours
- GSM/HSDPA**
- Positioning:** GPS

OceanScan can collect data for you.

Tell us the location and type of data that you need and we will collect the data for you. Our vehicles can be customized for the integration of new sensors and communication devices. Please tell us what you need.

OceanScan can support your AUV operations.

If you do not feel comfortable operating an AUV, we can give you the operational support you need. OceanScan provides advanced survey and consultancy services in close cooperation with customers.

OceanScan can develop your solution.

Our developments are based on three key concepts:

- 1 open systems,
- 2 continuous technological integration,
- 3 co-develop solutions and operational experience with the users.

The team has extensive experience in state-of-the art technologies and systems engineering.

