

MAN PORTABLE AUTONOMOUS UNDERWATER VEHICLE

300 meter Depth - Real-time Tracking - 20 Hours Endurance



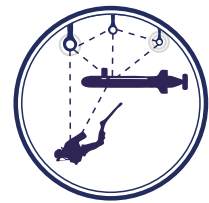
Seabed Acoustic Imaging



Water Quality Monitoring



MCM Operations



Sparse-LBL Communication

Description

COMET-300 is a two-man portable AUV designed to cover large underwater areas in a limited time and with high accuracy by offering precise real-time positioning and advanced sonar imaging.

Thanks to its acoustic communication system (RTsys Underwater Technologies core expertise) and Long Baseline (sparse-LBL) positioning algorithms, **COMET-300** is able to navigate up to 20 hours. Its positioning accuracy provides the user with precise positioning information regarding the field data acquired from the drone's various sensors during a mission.

COMET-300 is the ideal solution for extensive monitoring and surveillance of various areas, whether it be for commercial, scientific or military applications.

Advantages

- **Easy to deploy and recover with limited effort**
Two-man portable, less than 40 kg
- **Very accurate positioning (INS FOG)**
Limited drift independent of the covered distance
- **AUV position real-time follow-up from the surface**
Live-tracking with light portable device
- **Limited redeployment effort, quick mission sequencing**
- **Fully compatible with all RTsys Underwater Technologies products**

Navigation Capabilities

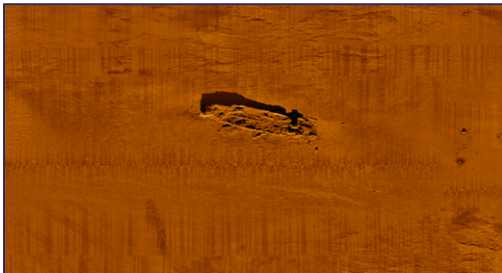
- Max. operational depth: 300 m
- Max. speed: 10 knots
- Endurance: up to 20 hours
- Positioning: RACAM sparse-LBL + GNSS + INS + DVL
- Acoustic communication range: 2 km
- Up to Sea State 4

Payloads & Options

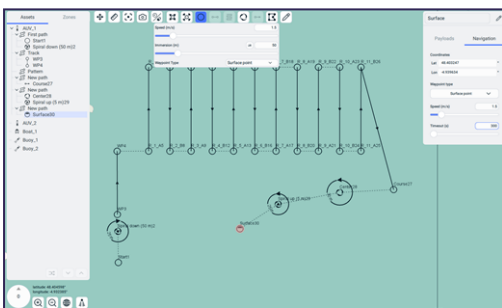
- RACAM sparse-LBL repositioning
- Side Scan Sonar (optional Bathymetry)
- Magnetometer
- Multiparameter probe (CTD, O₂, Chl)
- Video Camera & subsea light
- OAS



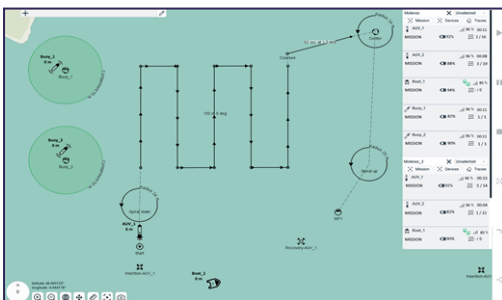
COMET-300



Side Scan Sonar



Mission programming



Real-time live monitoring

COMET-300 is a two-man portable AUV requiring no specific installation. Launching and recovery can be carried out from a light RHIB or any other vessel. The **COMET-300** can either cover a large area in a single mission or be suitable to serial runs of shorter detection missions with limited replenishment time. Once on the surface, the **GEOsys** remote controller facilitates the AUV's localization and recovery by transmitting the drone's position through UHF.

Sensors range

COMET-300 can be fitted with a wide range of sensors depending on the requested scope of work: high-resolution side scan sonar (optional swath bathymetry), video camera, various environmental sensors (CTD, O₂, Chl...). All the sensors' data is stored on the same medium, it is easy to retrieve at the end of a mission through Wi-Fi or Ethernet.

Navigation & communication

Two types of INS are available, the INS Phins, based on Fiber-Optic Gyroscope (FOG) technology, is a high-performance rotation sensing device that leverages the Sagnac Effect. By using optical waves propagating through a fiber-optic coil, it delivers precise rotation rate measurements and exceptional navigation accuracy. An INS based on MEMS technology is also available. While it provides high-performance navigation, its positioning accuracy is less precise compared to FOG-based systems.

On top of common navigation sensors (GNSS, INS, DVL), **COMET-300** embeds a native modem with RACAM sparse-LBL protocol. It provides very accurate relative positioning based on data redundancy. RACAM is implemented into every RTsys Underwater Technologies equipment, thus enabling a full compatibility and communication between devices.

The underwater acoustic communication allows the operator to monitor in real time the AUV's position and navigation data from the surface. The communication range covers 2 km and can be extended to 4 km by means of a relay beacon. Position and mission parameters are displayed on the user interface accessed from the surface with a tablet or computer. Commands can also be sent to the AUV.

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Dimensions

- Length: 2400 mm nominal (sensor dependent)
- Hull diameter: 150 mm
- Max. height: 332 mm
- Weight: 32 kg nominal (sensor dependent)

Supplied Hardware

- Fully rugged laptop
- GEOsys UHF remote control
- Recovery pike poles
- Transport Case