

PICASSO

Autonomous system for man-overboard (MOB) search & rescue

The system is based on an aerial drone equipped with optical sensors, an automatic target-recognition algorithm and a first-aid device. It is designed to be installed on-board a vessel.

STRUCTURE FRAME AND FITTING

The drone is a quadcopter platform designed for the marine environment with target recognition and autonomous navigation capabilities.

The whole mission can be monitored through the control unit by the operators, who can take direct control of the drone at any time.



The software analyzes all images taken by a daylight camera and an infrared camera, looking for the MOB across the sea surface.

The classification and recognition is performed by machine-learning running on the on-board controller.

The images of the scanned area are localized on the scenario map of the console for visual inspection.

The control station and the drone exchange commands and telemetry through a Wi-Fi radio link.



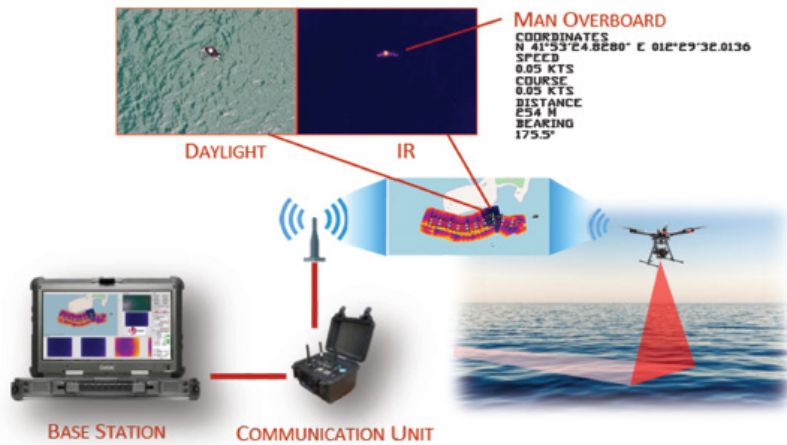
- > Automatic search area and path (ship track, environment data)
- > Autonomous navigation
- > Automatic detection and recognition
- > Automatic take-off and landing
- > Real-time imaging with onboard recording

SEARCH & RESCUE MISSION

The station generates the search path along the past course of the ship. The drone takes-off autonomously at a manual command or an order from an MOB-detection system. The mission is automatic: survey of the most-probable area, localizes the MOB and sends relevant coordinates to the vessel. At the end of the mission it returns to the vessel and lands autonomously on its platform.

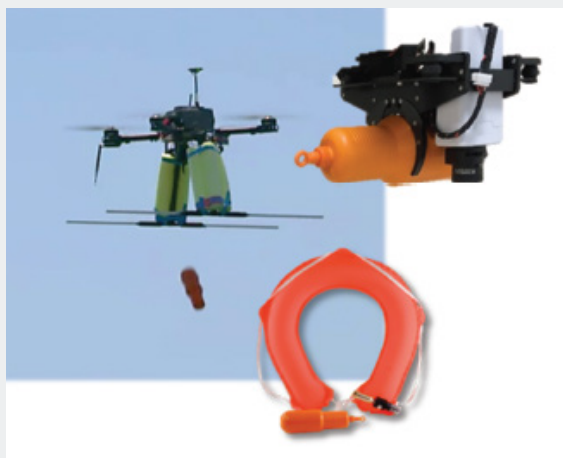
AUTO-INFLATABLE LIFEBELT

As an additional feature, the drone carries an auto-inflatable lifebelt. Once the MOB has been identified, the drone hovers on the victim and if authorized it releases the lifebelt in the water, near the victim. This feature increases the chances of survival and extends the time for rescue operation.



MAIN FEATURES

- > Total weight8,515 g
- > No. of motors4
- > Mission duration.....> 20 min



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AUTONOMOUS SYSTEM FOR MAN OVERBOARD AID & RESCUE.

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Picasso

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