

FERMIS SYSTEM

FERMIS main components:

The Airborne System (on-board) consisting of:

- ◊ Flying Platform (FP) - the aerial sensing system and the electronics
- ◊ FERMIS Payload—optical, meteorological and gas sensors

The Ground System (off-board) consisting of:

- ◊ The Ground Control Station (GCS) for piloting the UAV:
 - ◆ Ground Data Terminal (GDT)- data link between GCS and UAV
 - ◆ UAV Command Station (CS) - control of the UAV
- ◊ The Location Terminal Units (LTU) - fire fighting units location
- ◊ The Ground Fire Analysis Station (GFAS) - display the Common Operational Picture (COP) and support fire fighting coordination

DEMONSTRATION

FERMIS was tested and validated against the following use cases:

- ⇒ Assignment of a surveillance mission ⇒ Fire propagation simulation
- ⇒ Fire detection ⇒ Spatial data visualization
- ⇒ Fire tracking and monitoring ⇒ Moving objects detection
- ⇒ Environmental and toxic gas alerts ⇒ Locating firefighters
- ⇒ Storage of mission data

COORDINATOR



PARTNERS

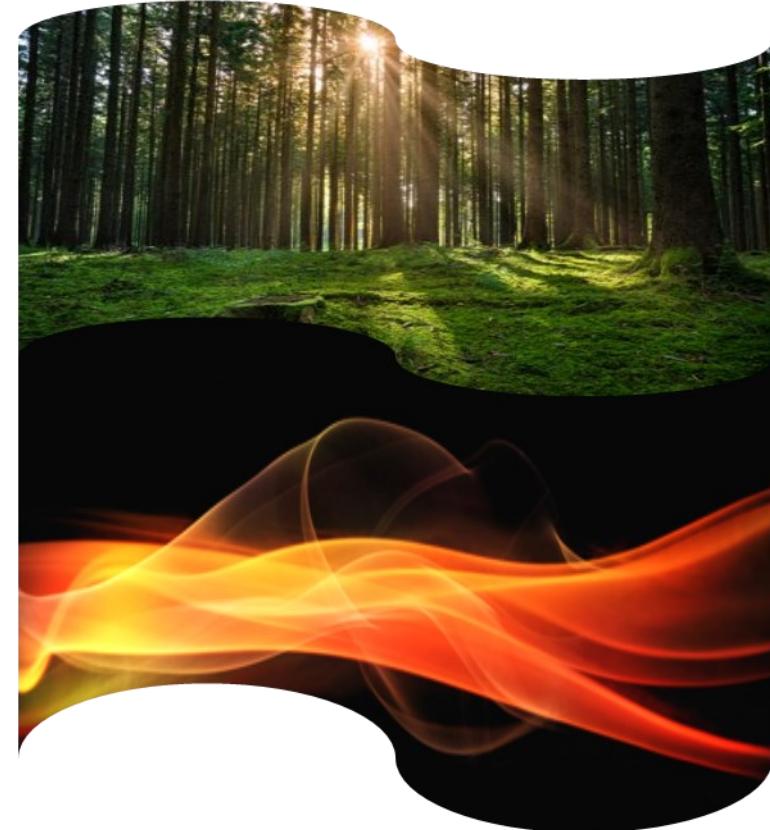


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CENTRE FOR
RESEARCH & TECHNOLOGY
HELLAS



CONTACT INFO

Zacharias Sarris
zsarris@altus-lsa.com
T. +30 28210 44492
www.altus-lsa.com



FIRE EVENT REMOTE MANAGEMENT INFORMATION SYSTEM

<http://www.fermis-project.eu>



HELLENIC REPUBLIC
Ministry of Education, Research and Religious Affairs
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Flying platform

The FERMIS Airborne System comprises the certified and field validated UAV SpyLite system developed by BlueBird (II) and the Airborne Sensor Package (ASP) that is the payload with which the UAV will be equipped to fulfill fire spot detection, environmental and gas measurements and fire propagation monitoring requirements.

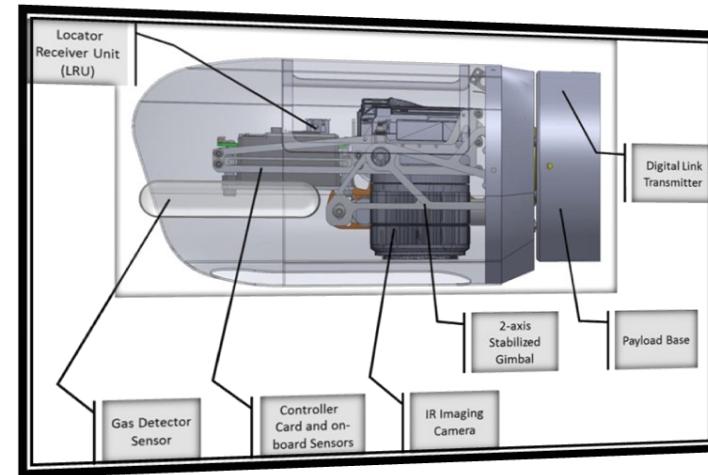


Ground Control Station

The Ground Control Station (GCS) is comprised of a Ground Data Terminal (GDT) which allow uplink and downlink communication with the UAV and a rugged Laptop with the UAV control software. The GDT is a part of Ground Control System facility, which connects to the GCS via Ethernet and allows establishing command/telemetry and video link with the UAV.



Payload



Ground Fire Analysis Station

The GFAS constitutes the DS (Decision Support) component of the overall FERMIS system on the basis that it holds a large set of different situation awareness modules that aim to gather, process and visualize the data provided by the FERMIS airborne sensing platform, through its GCS (Ground Control Station). In order to offer highly informative visual representations (including maps, layers, interfaces, etc.) to the end-user and facilitate decision making, the GFAS include extensive object detection and localization, image analysis and fire prediction assessment capabilities.

