

Partners



ALX Systems

ALX Systems provides mission-optimized UAV operating system, with AI enhancement.

The solution supports secure cloud control, integrated image recognition, obstacle avoidance and path finding, as well as complete integration of swarm capabilities.

To complete our offer, we provides customer based solution, like integrated security system (Sentinel), counter-UAV solution (Spartiath), and many other ones dedicated to indoor exploration, 3D mapping, search & rescue.

In a few words «ALX provides solutions to make UAV projects come true!»

➤ www.alxsys.com



Spacebel

Established since 1988, SPACEBEL is a Belgian Space Systems and Software Engineering SME operating in the Space and Earth monitoring application sectors, serving Space agencies, major aerospace prime companies, EU institutions and the commercial market. Our skills include the design, development, integration, validation of IT space systems and geospatial information systems along with the mission definition and analysis of EO minisatellites. We develop applications based on satellites and drones to monitor changes and identify species in forestry and agriculture.

➤ www.spacebel.com



Multitel

Expertise in computer vision and machine/deep learning. Multi-spectral image analysis algorithms development. Embedded IA solutions.

➤ www.multitel.be



ULiège - MRU Montefiore Research Institute

The Montefiore Institute of the ULiège conducts research in machine learning with strong expertise in decision making problems with a wide range of applications (energy, robotics, medicine...).

➤ www.montefiore.uliege.be



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SOLUTION

IADAS

ARTIFICIAL INTELLIGENCE FOR AUTONOMOUS DRONES AND SATELLITES

The IADAS project combines the economic and technological benefits of the world of drones and satellites (new space) where there is a need to accommodate artificial intelligence (AI) for large capacities of data processing and cost reduction.



01 AI algorithms

- Development of algorithms for image processing
- Development of algorithms for flight control applications
- Reduction of existing algorithms and porting on AI embedded platforms

02 Development of AI capable embedded platforms

03 Design of newspace and drone cameras

CONSORTIUM

Financing

Pôle Skywin project within Plan Marshall of the Walloon Region :



DELTATEC

Coordinator & contact

High-tech design company, specialized in advanced **hardware and software technologies** with a strong focus on digital imaging applications. **DELTATEC** is active in the industry sector (embedded systems, quality control projects), in the TV broadcast market (design of boards, automation of live shows), in the industrial vision (development of specific cameras) and in aerospace (on-board imaging subsystems, on-board computers, EGSE...).

Space started as a strategic activity in 2005 with the development of flight systems performing image acquisition and/or processing. In the space segment, DELTATEC's role consists in designing data processing subsystems, with a focus on the electronics of **cameras** used in earth or sun observation satellites. Another major activity is the design of **payload and on-board computers**.

In **IADAS**, methods for algorithm reduction are developed in parallel with the development of a high-performance platform adapted to **NewSpace** satellites and **UAVs**.

The increase in processing capacity enables more high-performance cameras to be carried on board, including hyperspectral cameras. As a design services company, DELTATEC role is systematically adapted to its customer needs : from pure hardware design, to the development of a dedicated software and to the full design (hardware, software and mechanics) of a product including its manufacturing management. With a team of more than 80 high-level designers, DELTATEC has developed a broad range of competence centers to create competitive advantages for its clients : deep learning/AI, streaming, cloud, image processing, embedded systems, mechanics, electronics, thermics, FPGA and PCB.

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