SenseUAV
by gradiant ▶

Detect & avoid system

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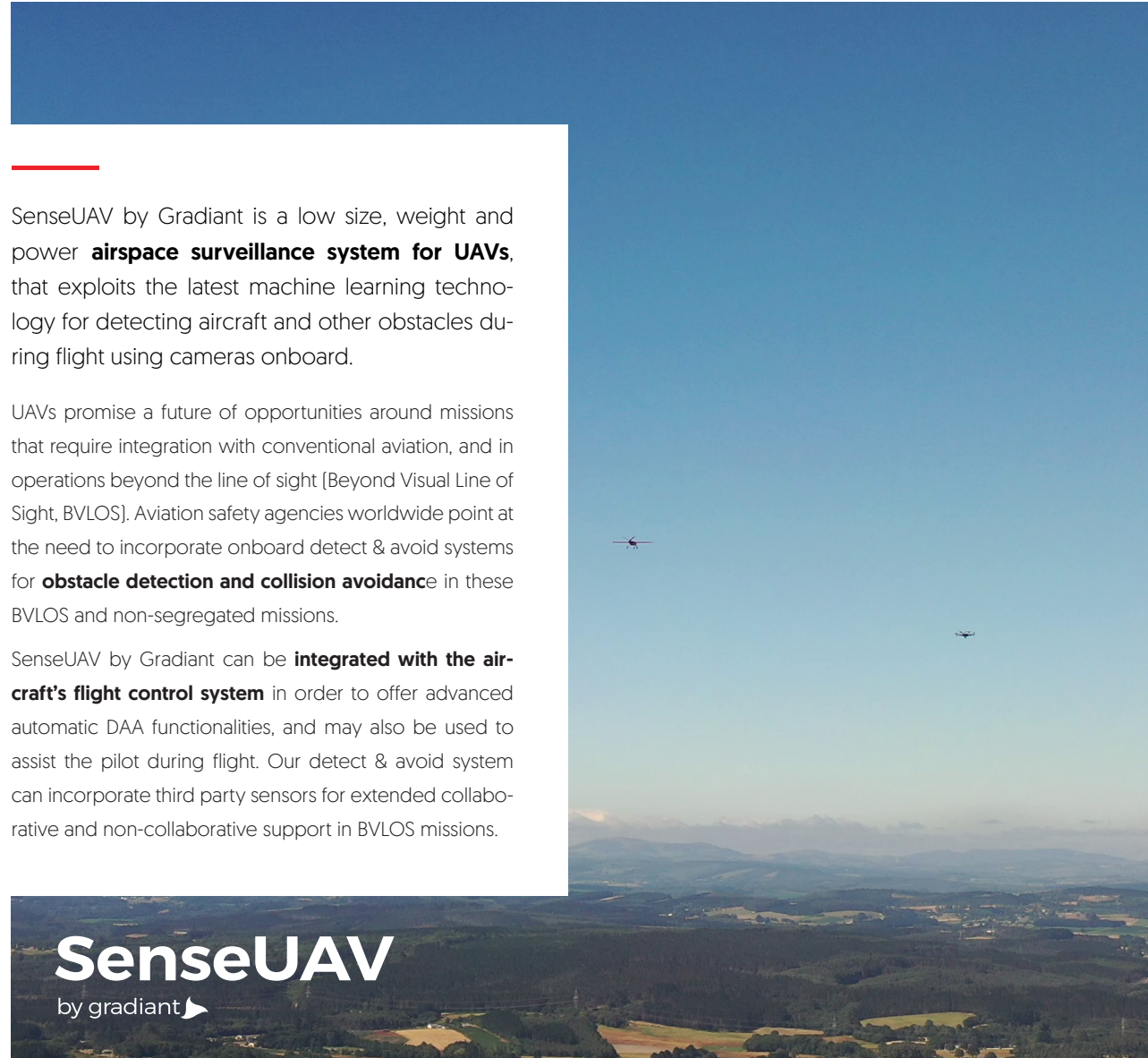
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SenseUAV by Gradiant is a low size, weight and power **airspace surveillance system for UAVs**, that exploits the latest machine learning technology for detecting aircraft and other obstacles during flight using cameras onboard.

UAVs promise a future of opportunities around missions that require integration with conventional aviation, and in operations beyond the line of sight [Beyond Visual Line of Sight, BVLOS]. Aviation safety agencies worldwide point at the need to incorporate onboard detect & avoid systems for **obstacle detection and collision avoidanc**e in these BVLOS and non-segregated missions.

SenseUAV by Gradiant can be **integrated with the aircraft's flight control system** in order to offer advanced automatic DAA functionalities, and may also be used to assist the pilot during flight. Our detect & avoid system can incorporate third party sensors for extended collaborative and non-collaborative support in BVLOS missions.

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AI-based technology for UAVs

Existing **detect & avoid solutions** have been conceived for large aircraft, and are therefore not adequate **for smaller unmanned vehicles** in terms of size, weight, power and cost.

No single detection technology can provide reliable detect & avoid collaborative and non-collaborative scenarios on its own. Human understandable visual awareness about the surroundings of aircraft is crucial for operators, even in fully autonomous missions.

SenseUAV by Gradiant adds an **extra layer of safety to UAV operations** by incorporating automatic obstacle and traffic detection.

- ✓ Detection and tracking of all traffic and obstacles around the aircraft in a 1km radius
- ✓ Compact footprint at under 500g including camera and processing module, for easy deployment on small, medium and large aircraft
- ✓ Automatic low bitrate visual reporting of obstacles and traffic, for real time operator assistance
- ✓ Open interfaces for integration with commercial flight control systems, and third party collaborative detection systems

Award winning AI technology

Real-time automatic obstacle and traffic detection

Visual situation awareness

BVLOS missions for surveillance, infrastructure inspection and search & rescue