

Project OPTIMAS to Utilize Schiebel VTOL UAS for Advanced Optical Laser Communications | UST

Summer James

Schiebel and OPTIMAS to Advance Optical Laser Communication

CAMCOPTER S-100 by Schiebel.

The European project OPTIMAS, has commenced collaboration with [Schiebel](#) to develop an advanced free-space optical communication system for multi-domain defence applications.

OPTIMAS aims to deliver high-speed, highly secure data transfer communications with a remarkable level of security, integrating innovative encryption technologies, such as quantum key distribution (QKD).

Schiebel's [CAMCOPTER® S-100](#), its dedicated [Vertical Take-Off and Landing \(VTOL\) Unmanned Air System \(UAS\)](#), will integrate advanced optical laser communication technology for the project. This will allow communication between the air segment and a satellite.

Designed for satellite constellations with space, air (drones), naval, and ground applications, OPTIMAS is expected to transform airborne laser communication systems. It will enable secure, high-speed communications and represents a significant advancement in this technology.

The project's final demonstration will focus on achieving secure, high-speed, bidirectional optical communications. It will allow for advanced satellite pointing, acquisition and tracking capabilities in Low Earth Orbits (LEO). Application in Medium Earth Orbits (MEO) and Geostationary Orbits (GEO) will also be explored, extending the scope and possibilities of the system.

The consortium includes 12 companies from seven countries, with Spain's influence evident in the participation of six Spanish organizations. The project coordinator, monodon by Navantia, reaffirms Spain's leadership in advanced defence and communications technologies.

The European Defence Fund (EDF) 2023 work programme supports the project, strengthening international cooperation in technological innovation for defence.

The OPTIMAS project strengthens Schiebel's technological advancement in multi-domain defence, and reinforces European collaboration in developing cyber-secure laser communications.