



Aiko, in collaboration with D-Orbit and UNIBAP, is thrilled to announce the successful completion of the In-Orbit Demonstration campaign for orbital_OLIVER, the AI-based software for onboard autonomy.

Turin, October 2023 - AIKO, the European Leader providing autonomous AI-based solutions for space sector, taking advantage of IOD services provided by D-Orbit, a leading space infrastructure and logistics company, and UNIBAP, a Swedish space edge computing and software company, is thrilled to announce the completion of the In-Orbit Demonstration (IOD) campaign of orbital_OLIVER, the company's flagship software product to enable autonomous spacecraft operations. Leveraging D-Orbit's expertise as satellite operators and conducting the IOD using live telemetry and Unibap's ix5 SpaceCloud space edge computer onboard D-Orbit's ION Satellite Carrier platform, this IOD program solidifies orbital_OLIVER's position as the leading onboard automation software on the market.

The mission was successfully completed through AIKO's Early Adopters Program (EAP), an innovative initiative that allows partners and operators to exclusively integrate AIKO products and contribute to the development of new releases. With a focus on innovative Earth Observation technologies, the initiative was supported by ESA's InCubed+ program.

During this mission, orbital_OLIVER acted mostly on the telecommunications subsystems, autonomously optimising the configuration of onboard radios. This showcased orbital_OLIVER's capabilities in improving onboard resource management and optimizing power distribution and bandwidth allocation. Thanks to its machine learning algorithms, orbital_OLIVER can indeed analyze complex telemetry data in real-time, update mission goals, and autonomously optimize the mission plan based on current needs. Before and during the EAP, the software's core libraries have undergone rigorous testing on various computing architectures ensuring wide compatibility with industry-standard, on-board computing systems and platforms.

The IOD represents a significant milestone in the progression towards autonomous satellite operations, proving orbital_OLIVER's effectiveness in overcoming mission bottlenecks due to latency, limited communication windows, and expensive downlinks.

orbital_OLIVER is ready for adoption by spacecraft manufacturers and operators, enabling autonomous operations by analysing satellite and environmental data and through dynamic task scheduling.

For more information about orbital_OLIVER, its Early Adopters Program, and the InCubed+ program, please refer to the official white paper on [AIKO's website](#)

Who's Aiko

The first European company to demonstrate Deep Learning algorithms in orbit, AIKO is a deep-tech company with offices in Italy and France. We specialize in Artificial Intelligence and Automation technologies for space applications. Established in 2017 as a result of an innovative research project at Politecnico di Torino by its founder, Lorenzo Feruglio, Aiko has already developed various products enabling automation across different phases of the mission supply chain, from on-ground predictive maintenance to in-orbit planning optimization.

Comprising over 40 professionals from across Europe, Aiko has secured over 7 million euros in funding and is now expanding its presence in the international space market.