



D-Orbit Announces WILD RIDE, the Upcoming Mission of its ION Satellite Carrier

The space transportation company will launch its satellite platform in June 2021, carrying six satellites and three payloads from eleven different nationalities.

Fino Mornasco, 31-05-2021: **D-Orbit**, a space logistics and transportation company, announced today the **upcoming launch of WILD RIDE, the third mission of its proprietary space transportation vehicle ION Satellite Carrier**. Scheduled to lift-off in June 2021, the vehicle, called **ION SCV Dauntless David**, will deploy six satellites into distinct orbits and perform the in-orbit demonstration of three payloads. This mission, which serves clients from **eleven different nationalities**, will increase the total number of payloads launched by D-Orbit to 54.

“Besides the many technical advances, this mission marks a major milestone for us: an international collaboration involving companies and institutional organizations from 11 nations, the largest we have had so far,” said Luca Rossetini, CEO of D-Orbit. “This is a testament to how borderless the space ecosystem truly is. Its rapid expansion, and the global services it is creating, will substantially improve life on Earth and mark this new decade in ways that we can’t even imagine right now.”

The mission manifest includes international clients, like the Spanish **Elecnor Deimos**, the Bulgarian **EnduroSat**, and the Kuwaiti **Orbital Space**, which will launch the country’s first radio amateur satellite. Also on board, under contract with ISILAUNCH and integrated into a QuadPack from Dutch satellite manufacturer **ISISPACE**, are Finnish **Reaktor Space Lab**, **Marshall Intech Technology** from UAE, and the **Royal Thai Airforce**.

The mission, which will start on a 500 km Sun synchronous orbit (SSO), will go through four phases: satellite deployment, in-orbit demonstration of the payloads hosted onboard, testing of D-Orbit’s advanced services, and decommissioning.

During the **deployment phase**, ION will deploy each satellite into a distinct orbit. The release of the six satellites onboard will follow a highly customized plan that defines the moment of release, and the direction and speed of ejection of each spacecraft.

During the **in-orbit demonstration phase**, ION will operate LaserCube a payload hosted onboard through an innovative plug-and-play system that streamlines the integration of instruments and experiments developed independently by third parties. LaserCube, from the Italian Stellar Project, is an optical communication device featuring a throughput performance more than 10 times higher than traditional radio devices. The increased throughput, combined with lower latency and increased security, enables new business opportunities in fields requiring increasingly higher data volumes like Earth imagery, weather forecasting, global telecommunications, and internet services.

The **third phase** will be focused on testing Nebula, a payload at the core of D-Orbit’s upcoming advanced services. The first iteration of Nebula, an on-demand, on-orbit cloud computing and data storage service being developed by D-Orbit UK, features Unibap’s SpaceCloud iX5-100 radiation tolerant computing module. A range of innovative applications will be demonstrated using sophisticated, artificial intelligence/machine learning (AI/ML) techniques; some of these experiments will feature video compressing techniques from industry specialist V-Nova. Another Machine Learning payload, called Worldfloods, has the ability to identify flooding and send down a flood map to emergency responders seconds after image acquisition. Developed by the Frontier Development Lab (FDL), a partnership led



by Trillium Technologies with the University of Oxford and ESA, Worldfloods offers a glimpse of a future where rapid insight is delivered almost instantaneously from space.

During the fourth and final phase, **decommissioning**, D-Orbit's operations team will deploy ADEO-N2. Developed by the German HPS, ADEO-N2 is a small 1U-size deorbit sail subsystem that will be deployed to 3.6 m² at the end of the mission to accelerate the decommissioning phase by passive means, using the air drag of the upper atmosphere. This will lead leading to a faster, residue-free incineration of ION.

The entire mission, including operations on payloads, will be managed by D-Orbit's mission controllers through **AURORA**, the company's proprietary cloud-based mission control software suite that enables satellite operators to manage and control multiple payloads simultaneously, from any location in the World, saving all the expenses connected with software design, development, testing, deployment, and maintenance.

The mission will also feature a **SETI (Search for Extraterrestrial Intelligence) experiment** in collaboration with media artist Daniela de Paulis and INAF (Istituto Nazionale di Astrofisica). The experiment, which investigates the possibility to communicate with other kinds of life in the universe, consists in the transmission of simulated alien messages to be received and decoded by radio telescopes worldwide.

"We are very excited about this mission; the great variety of payloads onboard, the purpose of their single missions, so many of which targeting sustainable purposes, innovative challenges, and great technological advancements, make this mission quite unique," commented **Renato Panesi**, the company's CCO. *"While the best part has yet to come, this has already been an extremely rewarding experience".*

While getting ready to launch this mission, the D-Orbit team is already working on future missions, with the next planned for Q4 2021.

About D-Orbit

D-Orbit is a market leader in the space logistics and transportation services industry with a track record of space-proven technologies and successful missions.

Founded in 2011, before the dawn of the New Space market, D-Orbit is the first company addressing the logistics needs of the space market. ION Satellite Carrier, for example, is a space vehicle that can transport satellites in orbit and release them individually into distinct orbital slots, reducing the time from launch to operations by up to 85% and the launch costs of an entire satellite constellation by up to 40%. ION can also accommodate multiple third-party payloads like innovative technologies developed by startups, experiments from research entities, and instruments from traditional space companies requiring a test in orbit.

The company successfully delivered 44 commercial payloads into space while developing advanced products and services for the needs of tomorrow.

D-Orbit is a space infrastructure pioneer with offices in Italy, Portugal, UK, and the US; its commitment to pursuing business models that are profitable, friendly for the environment, and socially beneficial, led to D-Orbit becoming the first certified B-Corp space company in the world.



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