

D-Orbit Launches 11th Orbital Transportation Mission in Three Years

The fifth carrier launched in space since the beginning of the year, ION SCV011 will bring to space 16 payloads for new and recurring customers

Fino Mornasco, Italy, June 13rd, 2023: Space logistics and orbital transportation company [D-Orbit](#) launched “Above the Sky”, the 11th commercial mission of their proprietary orbital transfer vehicle (OTV) **ION Satellite Carrier (ION)**.

The OTV lifted off on **June 12th, 2023**, at **2:19 p.m. PT (21:19 UTC)** aboard a **Falcon 9** rocket from the **Space Launch Complex 4 East (SLC-4E)** at **Vandenberg Space Force Base in California**, and was successfully **deployed 1h:20m after lift off** into a **525km Sun-Synchronous Orbit**.

ION is a versatile and cost-effective OTV designed to precisely deploy satellites and perform orbital demonstrations of third-party payloads hosted onboard. After the first commercial mission in September 2020, D-Orbit has completed nine more missions.

“We are proud to start our eleventh mission in three years, and we are thrilled to collaborate with so many new and recurring customers,” said Renato Panesi, D-Orbit’s CCO. “The tight launch schedule of 2023 is a proof of our improved capabilities, which enable us to manufacture and operate a constantly growing number of vehicles at the same time.”

Partnering with Valued Customers

During the mission, ION SCV011, dubbed “Savvy Simon”, will host onboard several satellites, third-party satellite deployers, and third-party payloads:

- **Kelpie-2** is a 3U CubeSat designed and built by [AAC Clyde Space](#). The spacecraft is a lightweight, advanced satellite designed to deliver Automatic Identification System (AIS) data exclusively to [ORBCOMM](#) and its clientele, as part of a Space Data as a Service agreement. The state-of-the-art satellite weighs just 4 kg and features a proprietary low-noise bus architecture, multiple SDR payload, and an advanced antenna concept developed by Oxford Space Systems, to maximize AIS detections of all message types.
- **EPICHyper-2** is a 6U EPIC CubeSat, designed and built by [AAC Clyde Space](#). The spacecraft, the second of three, shall deliver Hyperspectral data exclusively to their partners at [Wyvern Inc](#), a Canadian Earth observation company. The 6U EPIC VIEW satellites dedicated to Wyvern are designed as 'application specific' and feature increased data downlink and enhanced control capabilities and will deliver hyperspectral data, a method for capturing images of Earth across multiple bands, providing much more information than the three main color bands that the human eye captures. This data will initially benefit the agricultural sector

by aiding in yield optimization and detection of invasive plants, pests, and soil changes.

- **Spei Satelles** (SpeiSat) is a nanosatellite developed by the [Polytechnic of Turin](#) and the [Italian Space Agency](#), featuring advanced sensors to study space environments. It carries a nanobook with messages of hope and peace, printed with a publication from 2020. The satellite will transmit these messages worldwide from orbit as a symbol of hope. The mission is promoted by the Dicastery for Communication, with the logo designed by IUSVE students and pastoral coordination by the Digital Apostolate of Turin.
- The inaugural satellite venture by [Outpost, Mission 1](#), is designed to obtain crucial flight experience for the company's Ferry avionics system before embarking on their first Earth Return missions. On this first mission of Outpost's hosted payload platform, they will successfully bring into orbit their first customer payload. They have also innovated on the standard satellite structure materials and this launch will have the first ever-to-be-flown carbon fiber CubeSat frame. This mission is a testament to the unwavering dedication of the team at Outpost, whose efforts and commitment have propelled the company to this significant milestone. In only 7 months, the Outpost team built out their facility and designed and built two flight model satellites featuring in-house designed and built power systems, communications, computers, harnessing, and ADCS. The project, named 'Failure is an Option', epitomizes Outpost's approach of rapid innovation and premature launching, embracing the calculated risk of failure to expedite learning and to ensure dependable return to Earth.
- **NaviLEOTM** is a low-cost, high-performance Global Navigation Satellite System (GNSS) receiver developed by [SpacePNT](#). It is designed to meet the unique needs of the New Space market, filling the gap between current low-end and high-end space receivers. It provides a superior, affordable navigation solution suitable for individual spacecraft or large constellations, thanks to its use of rad-tolerant components and design. NAVILEO supports multiple constellations and signal frequencies and is fully reprogrammable in-flight. The design, leveraging SpacePNT's team's extensive experience, offers flexibility and scalability for a variety of missions, from Low Earth Orbit (LEO) to Geostationary Orbit (GEO), and even to the Moon. Its real-time positioning and timing accuracies range from less than 10 cm in LEO orbits to less than 100 m in cislunar orbits.
- **ODIN-DU1** is a hosted sensor, designed and built by [ODIN Space](#). The first payload launched by the company, this sensor is the first installation of a distributed network that will deliver novel data on lethal sub-centimeter debris. ODIN Space will map the debris population, and the size, speed, and trajectory of debris in LEO and GEO. The ability to map the sub-centimeter debris environment provides the missing piece in the space situational awareness ecosystem.

- **UKRI SWIMMR-1** is a radiation monitor designed to collect data for space weather monitoring. This mission addresses radiation threats to spacecraft and aircraft, which rank among the most high-profile space weather risks and are a key focus of the UK government's severe space weather preparedness strategy. Additionally, the payload acts as a precautionary step, optimizing value and reducing potential risks for subsequent SWIMMR space missions. The instrument is being deployed as part of the ['Improved in-situ radiation measurements for space and aviation'](#) project, led by STFC RAL Space, within the [SWIMMR \(Space Weather Innovation, Measurement, Modelling and Risk\)](#) program of UKRI.
- **AlbaPod 6P PocketQube satellite deployers** are two satellite deployers specifically designed by [Alba Orbital](#) supporting various formats from 1p to 3p PocketQube format satellites. Onboard this mission, the AlbaPods will release six PocketQube satellites into orbit.

ION will also host onboard a further satellite from an undisclosed customer.

D-Orbit's mission control team is now performing a series of tests and diagnostics in preparation for the operational phase.

Above the Sky is ION's fifth mission in 2023. **D-Orbit launched its first ION in September 2020** aboard an Arianespace VEGA launcher. With this launch, the Company will have transported to space **more than 110 payloads** collectively.

About D-Orbit

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

Founded in 2011, 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 whole, fully redundant ION can be rented for edge computing applications and space cloud services to provide satellite operators with storage capacity and advanced computing capabilities in orbit.

D-Orbit's roadmap includes becoming a relevant player in the in-orbit servicing market, which is forecasted to become one of the largest, growing markets within the space sector.

D-Orbit has offices in Italy, Portugal, the UK, and the US; its commitment to pursuing business models that are profitable, friendly for the environment, and socially beneficial, led D-Orbit S.p.A. to become the first certified B-Corp space company in the world.



D-Orbit Launches 11th Orbital
Transportation Mission in Three Years

Contacts

Elena Sanfilippo Ceraso – Head of Media and Public Relations
comms@dorbit.space

Follow us on:

LinkedIn: www.linkedin.com/company/d-orbit

Facebook: facebook.com/deorbitaldevices/

Twitter: twitter.com/D_Orbit

Instagram: instagram.com/wearedorbit/