Satellite electric propulsion Transversal competencies



Launched in 2021, ION-X provides electric propulsion solutions for small satellites. Based on patented electrospray technology, our unique ionic liquid thruster is the next big thing in small satellites propulsion. It will deliver unmatched thrust and fuel efficiency while offering great operability with non-toxic & non-pressurized propellant. ION-X first demo mission is expected for mid-2024 onboard SpaceX Falcon9 Transporter mission.

COMPETENCIES & CAPABILITIES

ION-X currently designs, develops and commercializes a new type of electrospray propulsion system for small satellites.

Our thruster uses a mesh of thousands of nano-spikes, and an intense electric field to dissociate ions from the ionic liquid - our green, inert and non-toxic propellant. As a result of this dissociation, ions are ejected at very high speed, therefore generating extremely efficient propulsion.

The company has acquired significant design and testing capabilities in electric propulsion, high-voltage electronics, on-board computer, fluidic system, plume characterization and more generally vacuum equipment.



PRODUCTS & SERVICES

ION-X thruster currently under development, has the following specification:

- Propulsion performances:
 - 1mN of thrust
 - 5000s of ISP
- Form Factor 1U
- < 1.5 Kg wet mass
- < 50W electric power draw
- CAN communication protocol
- Non-pressurized, inert and green propellant
- No external cathode
- No warm-up period
- Stealth / low signature exhaust beam

MAJOR SPACE PROJECTS & REFERENCES

- Demonstration mission #1 planned with Endurosat 12U platform on-board Space-X Falcon9 for Q3 2024
- Demonstration mission #2 planned with Space Inventor and Infinite Orbits on EDISON mission, in the frame of ESA's Pioneer program. Launched currently planned for the 2nd half of 2024
- Demonstration mission #3 planned with a French small satellite manufacturer for Q1 2025

POINT OF CONTACT

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