



Orbion Space Technology

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as of 20 August 2026



Orbion Space Technology

Orbion Space Technology is a Houghton, Michigan-based electric propulsion company developing Hall-effect thruster systems designed specifically for the commercial small satellite market. Founded by Michigan Technological University researchers led by Professor Brad King, Orbion is bringing high-performance ion propulsion technology to satellite sizes and price points previously served only by less efficient chemical systems. Orbion's Aurora Hall thruster system delivers specific impulse (Isp) exceeding 1,500 seconds — far higher than chemical alternatives — enabling small satellites to perform extensive orbital maneuvers, formation flying, orbit maintenance, and controlled deorbit at the end of mission life. The system is designed for integration into satellites ranging from 50 to 500+ kg across LEO, MEO, and beyond-LEO missions. Backed by US Air Force SBIR funding, commercial investment, and partnerships with leading smallsat manufacturers, Orbion is developing its propulsion systems in parallel with the rapid growth of commercial satellite constellations that require reliable, high-performance in-orbit propulsion. The company represents Michigan's emerging role in the commercial space supply chain, leveraging the state's deep manufacturing expertise and the research capabilities of Michigan Tech.

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SERVICES

Services

CONOPs Planning

Orbion assists with CONOPs planning, helping customers coordinate propulsive maneuvers with power, payload operations, and downlink requirements to optimize mission value.

On-orbit Support

Orbion provides on-orbit support, including launch and early-operations assistance, and can handle all mission maneuvers so customers can focus on data products.

Orbit/Mission Analysis

Orbion provides orbit and mission analysis, including trajectory analyses and scenario modeling, to determine the best path for spacecraft to travel between orbits.

Propellant Loading/Fueling

Orbion advises on propellant loading and fueling options, helping customers choose between shipping systems fully fueled or fueling on-site at the launch integration site.

Propulsion Interface Engineering

Orbion Space Technology offers engineering and co-engineering services, including mechanical and thermal interface design and integration labor for their propulsion systems.

Product catalogue



ORBION SPACE TECHNOLOGY

Aurora Hall-effect Propulsion System

Fully integrated, flight-proven Hall-effect propulsion system for demanding LEO/MEO/GEO/xGEO missions — radiation-hardened, magnetically shielded, continuously throttleable from 10

Technology	Hall-effect thruster (HET), magnetically shielded
Power range	100 – 300 W (continuously throttleable)
Thrust-to-power	> 60 mN/kW
Specific Impulse (Xe)	1,400 s
Propellant	Xenon or Krypton
System mass (dry)	~8 kg (not including propellant and tank)
Thruster dimensions	9.2 × 9.8 × 16.7 cm, 1.5 kg

price on request

Contact Orbion Space Technology

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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