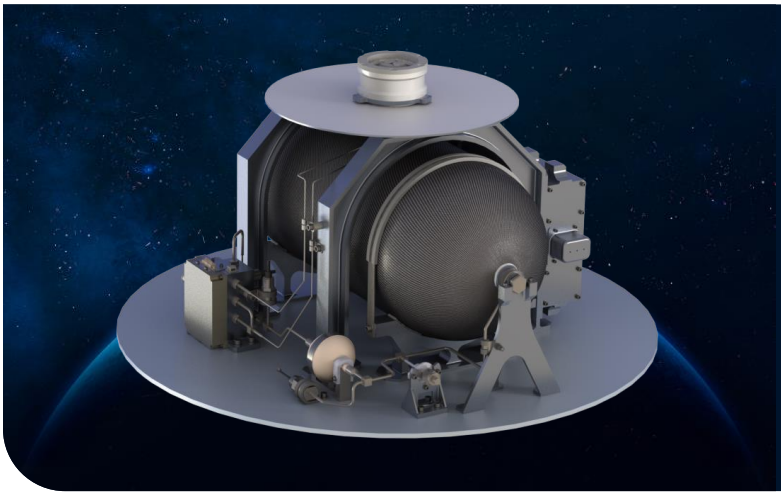
EXOTERRA

Iris – Propulsion Module



Product Overview

ExoTerra's Iris Propulsion Module can deliver up to 275 kN-s to any spacecraft and fits inside the diameter of a standard 24 in Lightband. Iris is an all-in-one, pre-packaged, bolt-on electric propulsion solution for your spacecraft.

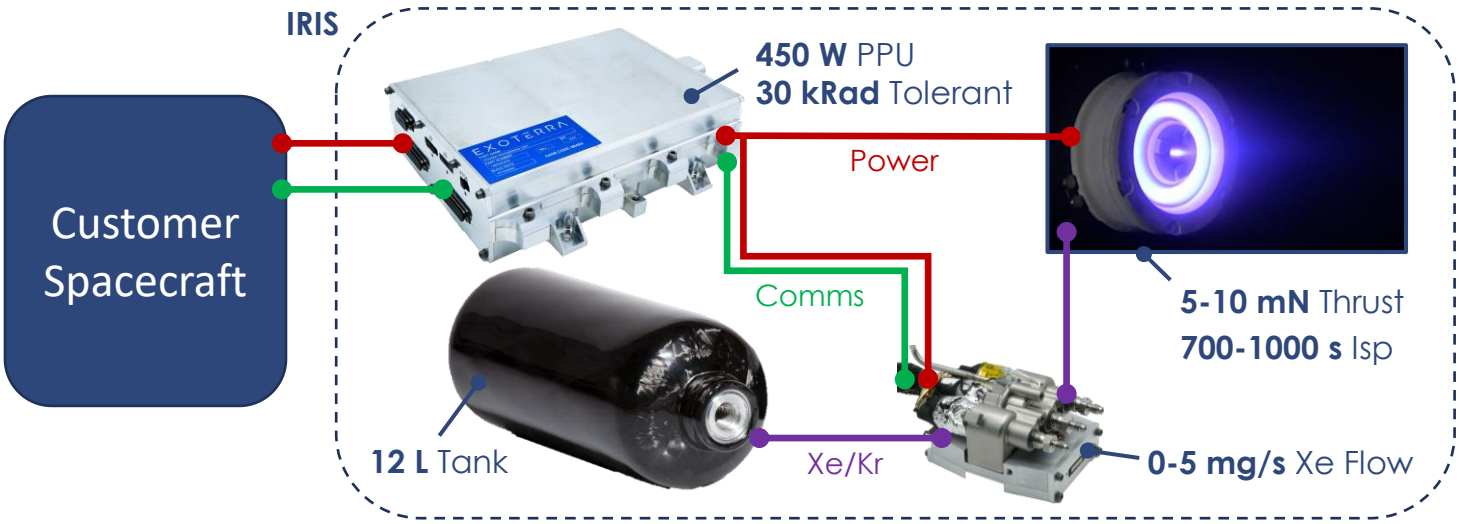
IRIS is based on ExoTerra's Halo miniature Hall-effect thruster, enabling operation from 100 to 450 W power from the spacecraft. The module includes all of the high efficiency power processing, propellant management and flow control necessary.

Revolutionary Solar Electric Propulsion Module

ExoTerra's revolutionary bolt-on Solar Electric Propulsion Module, Iris, offers best-in-class propulsion performance in a packaged solution. Rideshare small spacecraft no longer have to settle for sub-optimal orbits or short duration missions. Iris offers the ability to optimize the mission orbit by adjusting inclination or orbit altitude after a rideshare drop-off, reduces life cycle cost by extending mission lifetime up to 5 years, enables end of life deorbiting, or performs large orbit insertions.

Iris is already designed for LEO constellation spacecraft. It can mount inside a standard 24" Lightband and the total height is less than 30 cm. Electronics are radiation tolerant to 30 kRad TID and can operate at low sub-kilowatt levels. Adding to operational flexibility, Iris can be operated using xenon or krypton as propellant.

Input Power: 150 – 450 W
Input Voltage: 20 – 36 V
Thrust Range: 4 – 30 mN
Isp Range: 700 – 1400 s
Dry Mass: 25 kg
Total Impulse: Up to 300 kN-s
Radiation Tol.: 30 kRad
Propellant: Xenon or Krypton



For more information contact:

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About ExoTerra

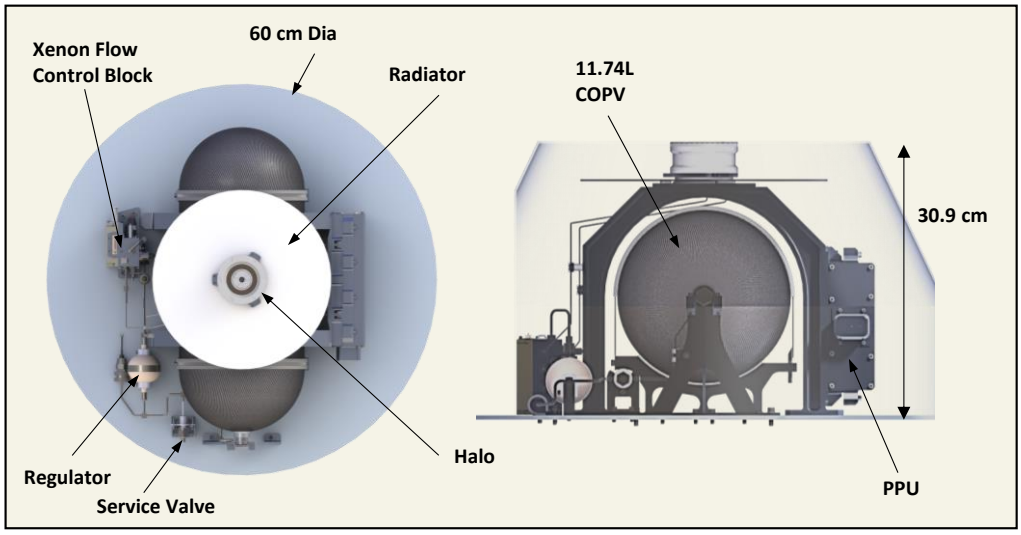
ExoTerra was founded in 2011 with a vision of reducing the cost of space exploration. We pursue this goal by developing affordable technologies that reduce the cost of gravity by minimizing spacecraft mass through electric propulsion, miniaturization of components, and in-situ resource utilization.

Our Team

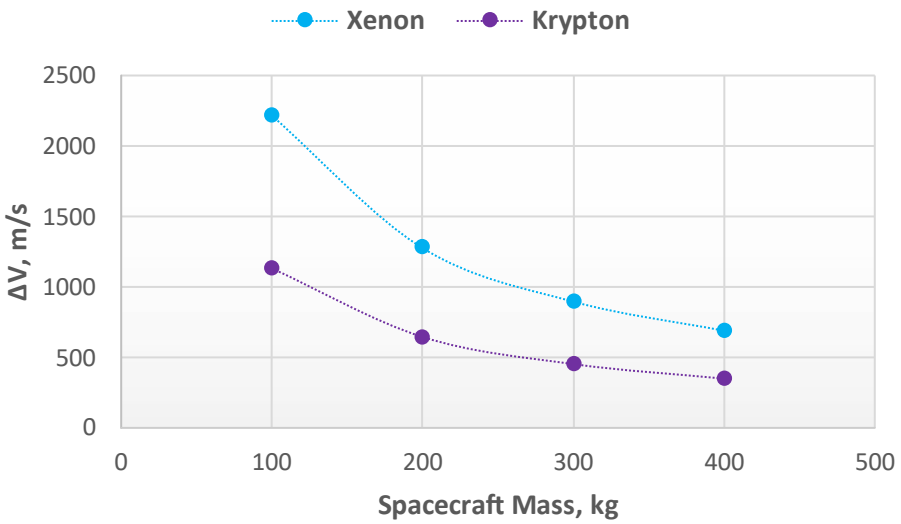
ExoTerra's team consists of over 50 engineers and technicians. Not just Hall thruster experts, our veteran engineers and staff have designed and flown over 15 different commercial and government spacecraft, many of which utilized solar electric propulsion. ExoTerra has the facilities and expertise necessary to design, build, test and fly complete propulsion solutions.

Iris Development Status

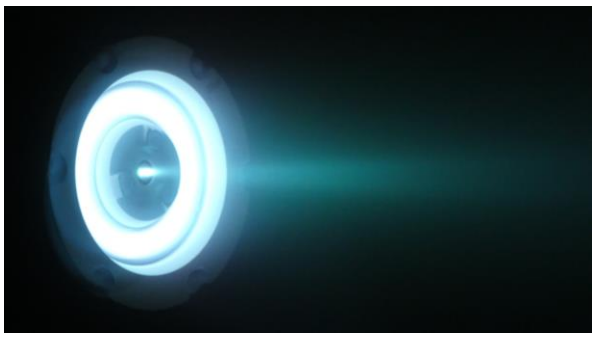
ExoTerra's Iris propulsion module leverages the flight heritage of the Halo electric propulsion system. This technology is due to launch in 1Q2023 to support a LEO constellation. The major components of Iris are flight-proven.



Iris Module Envelope Dimensions (cm)



Iris Performance Envelope
Max. Specific Impulse Operating Point



Halo operating with xenon propellant

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