

# MICRO Dragsail

*Effective deorbiting for Microsatellites in LEO*

## Systems For Sustainable Use Of Space

Recent changes in US FCC policy requires all satellites licensed or launched from the US to deorbit within 5 years of end of mission. The MICRO dragsail system has been designed as a cost-effective and reliable solution for accelerated disposal from LEO and protecting critical constellation orbits.

The system is robust to spacecraft anomalies that may compromise the ability to deorbit with propulsion systems, whilst imposing minimal resource demands on the host spacecraft.

### Key Features

- 10m<sup>2</sup> deployed drag area
- Low mass (<1.6kg)
- Passive, reliable deorbiting
- Optimised for Microsats in rideshare or LEO constellation orbits
- Activation through power switch, watchdog, or independent RF communication chain
- Can be powered from internal battery
- Designed for late stage integration



## Pioneering The Future Of Deployable Technology In Space

With extensive expertise in deployable space technology and mission delivery, our team is equipped to offer customers both off-the-shelf systems and tailor-made solutions to meet their unique requirements in Earth orbit and beyond.

FronD Space Systems has grown out of the University of Auckland's Space Institute, Te Pūnaha Ātea at the heart of New Zealand's emergent and energetic space eco-system and has the benefit of over a decade of combined experience in delivering deorbiting systems.

To find out more about the range of products from Frond, or to discuss your needs, contact us at:

Info@frond.space

## Indicative Performance

Performance of dragsail systems is dependent on atmospheric density, which varies significantly based on Sun-Earth interactions. We offer a free analysis service before purchase to make sure our products are right for your mission.

Deorbiting time for a typical 75kg Microsat in a Sun-Synchronous Orbit, in a random tumble starting in 2030 demonstrates efficacy of the MICRO sail system.

## Interfaces

### Electrical interface:

8-12V, 1.6A, <60s duration  
Micro D-sub (9-way)

### Separation switch (watchdog with battery power configuration only)

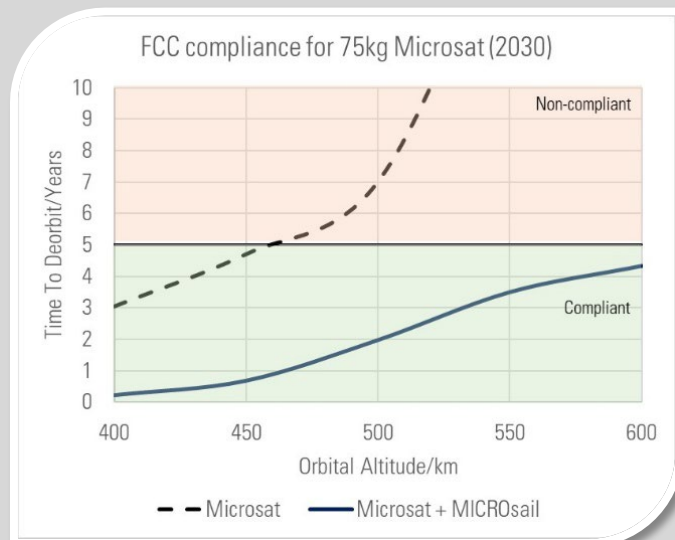
Pull to ground  
Micro D-sub (9-way)

### Data interface (watchdog configurations only):

I2C, CAN, RS-422  
Micro D-sub (9-way)

### Mechanical interface:

9x M4 Screws



## Options

**Spacecraft actuated** - The MICRO sail requires only an activation power signal from the spacecraft EPS to deploy.

**Onboard watchdog** - Powered by an internal long-life primary battery activated at spacecraft deployment or from the spacecraft EPS and incorporating a watchdog to be kicked periodically from the ground.

**Activation through independent RF chain** - Working with our partners Ant61, sail can be deployed by ground command via satellite communications networks.

Talk to us about your needs – we can accommodate configuration changes whilst retaining the critical system performance and form factor.

