Control and Deorbit Spacecraft without Rockets

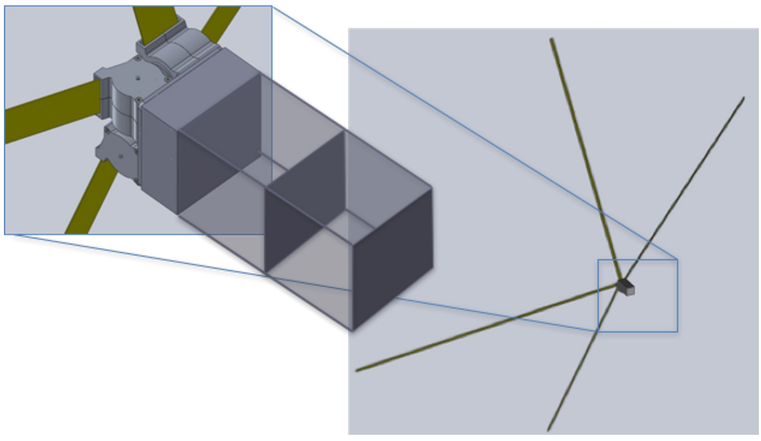
Our vision is to advance human progress in low Earth orbit with innovative business methods and new technology.

www.orboticsystems.com

Unrivaled and unique, the D3 can inexpensively maneuver, orientate, and deorbit your spacecraft. All this without any explosive rocket fuel.

Deorbit Drag Device (D3) Summary

The D3 modulates spacecraft drag force, while controlling orientation and orbital decay. It can be used to control a satellite constellation, deorbit a satellite, and target the re-entry location. It does all of this passively, without any rocket propellant. The D3 is a simple, reliable, low-cost, non-propulsive system. Any operators of a small spacecraft can use the D3. This includes CubeSats, CYGNSS spacecraft, ESPA Class spacecraft, and the Orion 38 motor (depleted).



Milestones

Orbotic Systems Founded
August, 2019

Incorporated
June, 2020

Expanded team to four
September, 2020

Obtained exclusive license for D3 from NASA and UF
October, 2020

Retained North Coast Capital Advisors Ltd
December, 2020

Fabrication and Test Facilities Acquired
June, 2021

Exhibitor for Space Tech Expo
October, 2021

D3 Launch on SpaceX Falcon
November, 2021

Problems

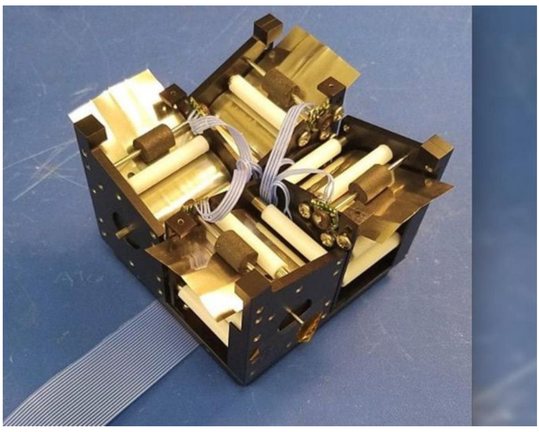
Here are just a few problems that small spacecraft operators face today:

- Lower launch and mission costs
- Conformance to a 25-year orbital debris mandate
- Space traffic management, orbital debris mitigation and satellite control
- Avoid collisions; reduce liability and risk of generating new debris
- Provide ability to target unpopulated earth re-entry points
- Ability to stagger CubeSat constellations (or other spacecraft)
- Improve ground radar visibility of spacecraft

Solutions

The D3 will allow spacecraft operators to do the following:

- Inexpensively control spacecraft in orbit without rocket thrusters or dangerous rocket fuel.
- Meet the NASA and ESA 25 year deorbit mandate
- Easily perform a collision avoidance maneuver (CAM)
- Safely re-enter spacecraft over a chosen earth coordinate
- Quickly control satellite constellations
- Create a larger footprint for ground radar



FAQs

Does the D3 use any propellant at all?

No. This is great for spacecraft operators because it may take the craft out of ITAR, reduces weight (and cost), reduces complexity, and lowers legal and debris risks.

Re-entry can be accurately controlled?

Yes. Not only does this dramatically lower risk of death and damage (legal costs), but it also allows developers to use new materials. Examples include titanium, tungsten, tantalum, etc.

Can the D3 help control a constellation?

Yes. In addition to programmed and ground station maneuvers, the D3 can help identify spacecraft in a constellation. This will assist the operator in forming the desired pattern.

I have more questions. May I contact you?

Yes. There are many more capabilities of the D3. Contact us with any questions.