



---

Press Release Embargoed until 03:00 EST / 08:00 GMT / 09:00 CEST / 17:00 Tokyo

November 16, 2021

## Like a Tow-hook for Satellites: Astroscale Launches Docking Plate to Capture Defunct Satellites

*With tens of thousands of satellites set to launch in next ten years, Astroscale calls on operators to safeguard their valuable assets and help protect the space environment before launching into orbit.*

**Space Tech Expo Europe, Bremen, Germany, Nov. 16, 2021** – Astroscale Holdings Inc. (“Astroscale”), the market leader in satellite servicing and long-term orbital sustainability across all orbits, today revealed a universal docking device the company hopes will become standard fitment on all future low Earth orbit (LEO) satellites. Following on from the COP26 climate conference, Paris Peace Forum Net Zero Space Declaration, and the [G7 statement on space sustainability](#), Astroscale calls on operators to prepare their spacecraft with a Docking Plate to prepare for future removal and to help safeguard the space environment.

There are an unprecedented number of satellites due to launch over the next decade, the majority into LEO, (250km to 2000km above Earth). The U.S. Federal Communications Commission has approved 16,447 satellites within constellations to date and has applications pending for an additional 64,816 satellites<sup>1</sup>. The potential for high-velocity, high impact collisions is likely to increase unless disposal of satellites becomes part of everyday space operations.

“Over the last 6 decades more than 12,000 satellites have been launched, and this number could more than quadruple in a single decade,” said Nobu Okada, Founder & CEO of Astroscale. “This phenomenal growth shows how important space has become — to our economies, our way of life and to our fight against the climate change crisis. We urge the space community to demonstrate real commitment to protect the space environment by preparing satellites with a Docking Plate for future removal.”

Astroscale’s Docking Plate can be compared to a car ‘tow hook’ — a standardized interface that enables future servicing. Docking plates are designed to be discrete during satellite operations but robust and reliable if required. They’re customizable for different satellite designs and will enable both robotic or magnetic capture mechanisms to securely attach a servicer to a satellite. The End-of-Life Services by Astroscale-demonstration (ELSA-d), currently undergoing testing in LEO, is the first spacecraft servicer of its kind to demonstrate the technology and commercial viability of removing defunct satellites. The ELSA-d mission uses the first prototype of the new docking mechanism, preparing the way for this first commercially available Astroscale Docking Plate for all satellite operators in LEO.

COP26 focused attention on the importance of proper environmental stewardship and highlighted our day-to-day reliance on satellites, both for communications and for

---

<sup>1</sup> Source: <http://www.parabolicarc.com/2021/11/08/planned-comsat-constellations-now-exceed-94000-satellites/>

monitoring the health of the planet. Future-proofing space missions with Astroscale's universal docking technology will not only keep orbital highways clear and safe by enabling future debris removal, it will also support the development of a dynamic on-orbit ecosystem, powered by the emerging on-orbit services and manufacturing market, which is conservatively estimated to be worth \$4 billion globally by 2030<sup>2</sup>.

"The Astroscale Docking Plate is designed to be lightweight and easy to fit onto low Earth orbit satellites," said John Auburn, Managing Director of Astroscale Ltd. "As a low-cost solution it enables satellites to be captured and removed from space, keeping our orbital highways clear. We all value satellite communications supporting our global connectivity and economy, and monitoring our environment on Earth. By preparing our spacecraft today we will ensure space is sustainable tomorrow, for future generations."

Astroscale's Docking Plate is being launched this week, 16-18 November, at the Space Tech Expo Europe Conference, Bremen, Germany. The Astroscale team will also present the new Docking Plate in the U.S. at a conference in the spring.

**Key features include:**

- Discrete: designed to be lightweight, compact and minimally intrusive.
- Low-cost: a price that can be integrated into your satellite development costs.
- Reliable: components are mechanically secured to be failsafe with no structural adhesive degradation issues.
- Robust: undergone qualification testing for the space environment.
- Durable: designed for an in-space lifetime of over 15 years.

**Technical features**

- Fiducial markers and retroreflectors: act as docking aids to guide navigation.
- Knurled reinforced rim: enables robotic grappling technology. The plate is compatible with a variety of capture mechanisms including magnetic and robotic.
- Simple 3 bolt solution: makes it easy to install and can be assembled from the outside.
- Truss legs with 3 size options: customizable to suit any satellite design.
- Flush mount option: can be integrated into an existing structure.

Find out more: [www.astroscale.com/docking-plate](http://www.astroscale.com/docking-plate) (live on Tuesday 16<sup>th</sup> November)

**END**

---

---

<sup>2</sup> "UK In-Orbit Servicing Capability: A Platform for Growth"  
<https://sa.catapult.org.uk/news/in-orbit-servicing-capability/>

The market opportunity for debris removal and on-orbit servicing (OOS) is developing and will become a multi-billion-dollar market by the end of the decade. It is conservatively predicted to be valued at ~\$4.4Bn in cumulative revenues (within a range of \$2.3-7.2Bn) by 2030.

## Contact

Global Communications & Marketing | [media@astroscale.com](mailto:media@astroscale.com)

Japan: Satoshi Ito | Tel: +81-3-6658-8175

UK & Europe: Andrea Stewart | Tel: +44 (0) 7528-132-489 [a.stewart@astroscale.com](mailto:a.stewart@astroscale.com)

U.S. & Israel: Dave Hebert or Krystal Scordo | Tel: +1-202-744-8127

## Additional materials

Download more photos and watch an animated video of the Astroscale Docking Plate in orbit: [www.astroscale.com/docking-plate](http://www.astroscale.com/docking-plate) (live on Tuesday 16<sup>th</sup> November)



1. (left) Features a de-coupled top plate and structural deck to alleviate thermal stresses.
2. (right) Easy to install — simple 3 bolt solution assembled from the outside.



1. (left) A flush mount alternative which can be integrated into existing satellites structures.
2. (right) Includes docking aids such as fiducial markers and retroreflectors designed to guide navigation and enable accurate position and attitude estimation of the client satellite.

## About Astroscale

Astroscale is the first private company with a vision to secure the safe and sustainable development of space for the benefit of future generations, and the only company dedicated to on-orbit servicing across all orbits.

Founded in 2013, Astroscale is developing innovative and scalable solutions across the spectrum of on-orbit servicing, including life extension, *in situ* space situational awareness, end-of-life, and active debris removal, to create sustainable space systems and mitigate the growing and hazardous buildup of debris in space. Astroscale is also defining business cases

and working with government and commercial stakeholders to develop norms, regulations, and incentives for the responsible use of space.

Headquartered in Japan, Astroscale has an international presence with subsidiaries in the United Kingdom, the United States, Israel, and Singapore. Astroscale is a rapidly expanding venture company, working to advance safe and sustainable growth in space and solve a growing environmental concern.

Find out more at [www.astroscale.com](http://www.astroscale.com)