Roll-up satellite solar panels

Overview

The Roll Out Solar Array (ROSA) and its larger version ISS Roll Out Solar Array (iROSA) are lightweight, flexible power sources for spacecraft designed and developed by Redwire. [1] This new type of solar array provides much more energy than traditional solar arrays at much less . NASA's Space Technology Mission Directorate (STMD) develops technologies through a community of entrepreneurs, researchers, and innovators to solve the nation's toughest challenges and enable future NASA and commercial missions to the Moon, Mars, and beyond. Each impact story summarizes an . Enable small and commercial satellites to deploy high-power-density, foldable, and flexible solar array systems in orbit - lighter, faster, and cheaper Incubated in Johns Hopkins University, we are a startup company which specialize in the design and engineering of flexible and foldable deployable . The Roll Out Solar Array (ROSA) from Redwire Space is a Satellite Solar Panel with a power-to-mass ratio of 100-120 W/kg and a stowed power density of 40 kW/m³. [2] . We are partnering with a variety of firms to offer complete solar array capabilities. "Solestial's technology is the perfect complement to our high-performance composite structures. With heritage on LEO, GEO, and deep space missions alike, ROSA ideal solar array for missions with the most demanding power, volume, and mass requirements.

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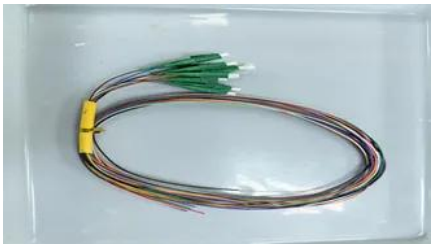
ROSA (Roll-Out Solar Array)

Utilizing strain energy for deployment, a proprietary roll-up stowed configuration, and an integrated modular photovoltaic blanket assembly eliminates the need for motors or complex mechanisms,

Impact Story: Roll-Out Solar Arrays

Dwarfed by the International Space Station's main solar arrays, spacewalkers Shane Kimbrough and Thomas Pesquet work to complete the installation of a roll out solar array on the P-6



Roll Out Solar Array

The new solar array design rolls up to form a compact cylinder for launch with significantly less mass and volume, potentially offering substantial cost savings as well as an increase in power for satellites.

Roll Out Solar Array (ROSA)

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[Rollable solar array by GalaxySpace redefines satellite compactness]

GalaxySpace, a commercial space company based in Beijing, has introduced a pioneering rollable solar panel that dramatically reduces satellite bulk while boosting energy efficiency.

Heliofold . Designing Flexible Solar Array Systems

We design and engineer flexible deployable solar array structures for small & commercial satellites, focusing on mass and reliability. These ROSA-like solar arrays enable lightweight roll out deployment

[Development and challenges of large space flexible solar arrays]

This paper reviews the global research landscape on spaceborne flexible solar arrays, examines key enabling technologies, and presents the team's recent research progress. The findings

Advanced Solar Power Systems for Satellites in 2026

On January 8, 2026, NASA said the Gateway Power and Propulsion Element had demonstrated startup of a power system built around roll-out solar arrays capable of generating 60

Solar Array

We are excited to collaborate with space manufacturing partners on the next generation of roll-out and foldable solar arrays. We envision a future where our photovoltaic technology supports the innovation

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