RIGID PANEL SOLAR ARRAY SYSTEMS

PRODUCT DESCRIPTION

Redwire Space provides a multitude of high-heritage rigid panel solar array systems that are scalable from 50W to over 15kW per wing, and in a variety of stowed and deployable configurations, and yoke / offset structure standoff configurations. Redwire rigid panel solar array systems offer the advantages of economy and rapid production times in a lightweight and powerful package.

Redwire’s proven designs implement high-heritage honeycomb panel constructions, low shock launch restraint systems, highly redundant and reliable hinge assemblies with damping and latching features as required. Redwire partners with the leading photovoltaic technologies from either Spectrolab, SolAero, Mpower, and Azur to provide the power at economical price points. Rigid panel solar arrays can also be designed for ESD applications, and electrostatic and magnetic cleanliness applications.

APPLICATIONS

+ LEO, MEO, and GEO Orbit Missions.
+ Deep Space Interplanetary Mission.
+ Small Sat/Cube Sat Arrays.
+ Lander Arrays.
PARAMETERS

+ Power Generation
  50W to >15kW per wing.
+ Mass
  .02 to .15 Kg/W.
+ Dimensions
  Panel size commensurate with power.
  ~1m x ~1m and larger.
+ Hingelines
  Modular pre-loaded hinge assemblies with latches are optimized for deployed strength and stiffness.
  Discrete viscous damped, eddy-current damped, or un-damped options.
+ Photovoltaic Technologies
  Spectrolab, SolAero, Azur, Mpower.
+ Construction
  Composite Facesheet with aluminum honeycomb panels with titanium inserts.
+ Offset Structures
  Simplistic yet strong offset structures are tailored to mission requirements.

MARKETS SERVED

+ Commercial Aerospace.
+ Military Aerospace.
+ NASA Research Missions.
+ University Funded Educational Missions.

OTHER FEATURES

+ Highly Scalable Array Sizes for variety of stowed volumes.
+ Cable/pully synchronization or passive mechanical synchronization options.
+ ESD applications, and electrostatic and magnetic cleanliness applications available.

MISSION HERITAGE

The Imaging X-ray Polarimetry Explorer (IXPE), Launched 9 December 2021.

Solar arrays are export controlled through an ECCN (Export Control Classification Number) issued by the United States Department of Commerce, ECCN 7A104. Export shipment requires successful application for an export license.

FOR MORE INFORMATION ABOUT OUR SPACE CAPABILITIES, CONTACT REDWIRE SPACE SALES AT DISCOVER@REDWIRESPACE.COM

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