



SPACE POWER SYSTEMS

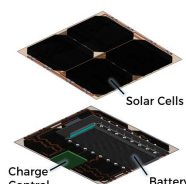
Modular Array for the Direct Distribution of Integrated Energy (MADDIE)

Introducing the Redwire Modular Array for the Direct Distribution of Integrated Energy (MADDIE) Electrical Space Power Systems. The highly modular MADDIE architecture integrates the PV, charge controllers, and battery pack components into a single standardized EPS module, minimizing NRE and lead time while simplifying AIT.

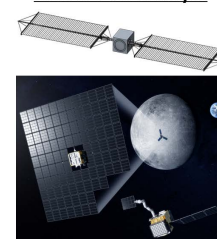
Using standardized and flight qualified EPS modules in series and parallel combinations, full EPS systems are highly customizable for a wide variety of spacecraft and applications.

With world-class expertise in solar arrays, batteries, and mission systems Redwire is a premier provider for power systems, from components up to a complete EPS.

MADDIE EPS Module



MADDIE EPS Concepts



APPLICATIONS

- + Spaceflight Power
- + Local Power for Distributed Payload Elements
- + Spaceflight Missions
- + Low Earth Orbit (LEO) Missions

PARAMETERS

	Nominal Module Building Block <i>(coming soon)</i>	
156 G	5 Years	3.32 (Min)/4.0 (Nom)/4.2 (Max) V¹
Module Mass	Mission Life	Output Voltage
6.8" x 6.5" x .75" 17.3 x 16.5 x 1.9 CM	30,000 Cycles²	300 - 1000 KM
Module Dimensions (L x W x H)	Number of Discharge Cycles	Orbital Design Altitude Range
	3.6 W (36 Min Eclipse)^{1,2}	
	Module Continuous Output	

Redwire Space Power Systems 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.

¹ Modules combine in series/parallel to form full spacecraft EPS

² Tune-able, higher discharge cycles can be achieved at a lower power output per module



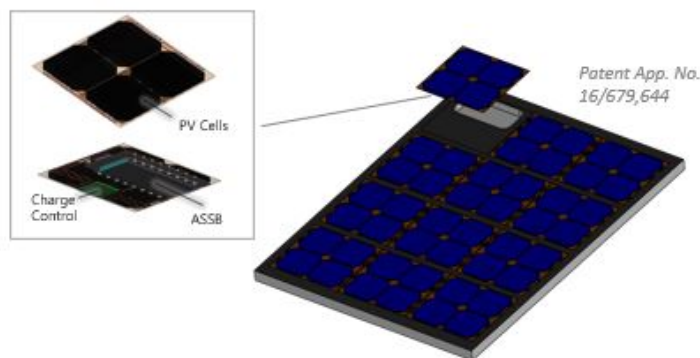
MADE IN THE USA

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BENEFITS

Customers select MADDIE for space power applications because the solution offers:

- + **Modularity** – Combines solid-state battery cell, PV array, and charge controller into 1 modular package that is a building block for a flexible EPS architecture
- + **Single Solution Simplicity** – Integrating EPS components into one unit delivered by one vendor dramatically simplifies both system integration and procurement
- + **Reduced Lead Time & Cost** – Standardized modules produced through automation as off-the-shelf components can be quickly combined to meet mission needs
- + **Reliability** – modularity enables a fault tolerant EPS allowing for high resiliency



For more information about our space capabilities,

CONTACT REDWIRE SPACE SALES



HERITAGE

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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