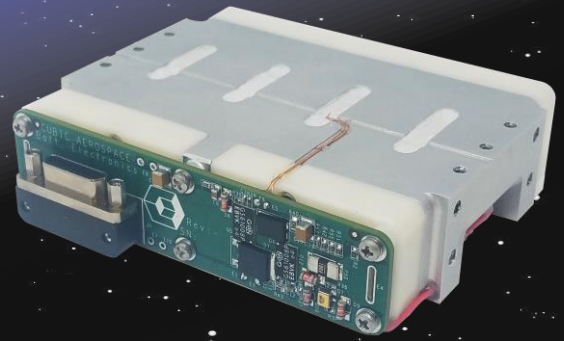


Modular SmallSat Battery

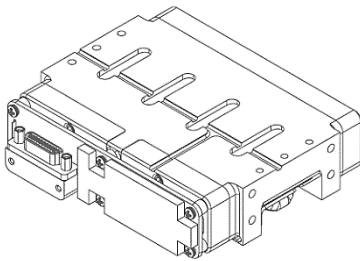
FACT SHEET



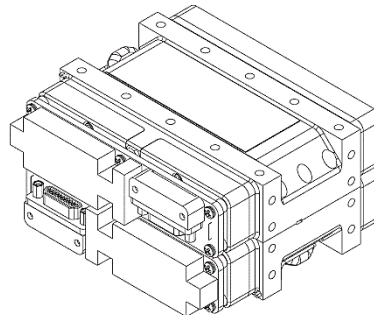
OVERVIEW

Cubic Aerospace's 45-Watt-hour, 14-Volt lithium ion battery module is a radiation tolerant, fault tolerant, and ISS compliant energy storage system. The aluminum and PEEK packaging is rigid, thermally conductive, and provides flexible mechanical and thermal interfaces. A thermistor and polyimide thermofoil heater allow for thermal control. Radiation tolerant battery interface electronics (BIE) provide remove-before-flight inhibit, over-voltage, over-current, and under-voltage protection. The chassis design enables mechanical integration with a second module for a 90-Watt-hour unit. The individually protected/inhibited battery modules can be connected in series or parallel. This battery module is designed for turn-key integration with the Cubic Aerospace 150-Watt CubeSat EPS.

45-Watt-hour Battery Module



90-Watt-hour, Two-Module Assembly



SPECIFICATIONS

Overall Dimensions	94.5 x 84.1 x 23.1	mm
Mass	< 410	g
Capacity	45	Wh
Maximum Discharge Rate	6.5	A
Maximum Charge Rate	1.6	A
Voltage	13.2 to 16.8	V
Operating Cell Temperature	10 to 60	°C
Heater Power @ 12V	4.5	W
Single Event Effects	Operate through: LET > 37 Survive: LET > 55	MeV-cm ² /mg
Total Ionizing Dose	30	kRad (Si)

FEATURES

Packaging

- Side or bottom mounting
- Aluminum chassis and PEEK cell capture plates
- External aluminum surfaces treated with MIL-DTL-5541 Type II, Class 3 chem film
- Kapton thermofoil heater

Built-In Protection

- Under/Over-voltage
- Over-current
- Remove-before-flight
- Positive temperature coefficient (PTC) overcurrent protection at each cell

Modularity/Scalability

- Designed for mechanical/thermal integration with a second module
- Modules can be connected in series or parallel to meet energy storage requirements

Electrical Interface

- 21-Pin Micro-D connector
- Connections for protected power, cell voltage sense, heater, and 10k NTC thermistor (potted on a central cell)

INQUIRIES

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