

B28-135

SmallSat Battery

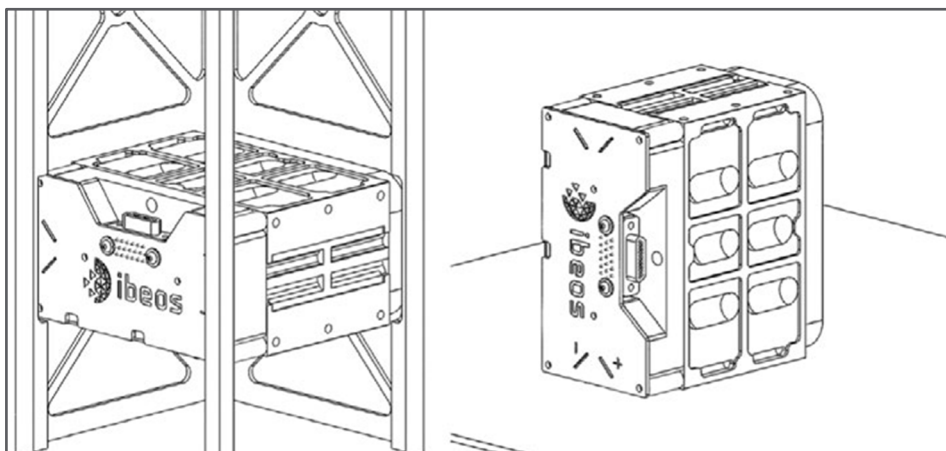


OVERVIEW

Ibeos' 135-Watt-hour, 28-Volt lithium-ion battery module is a radiation tolerant, fault-protected energy storage system. The aluminum and PEEK packaging is rigid, thermally conductive, and enables flexible mechanical and thermal spacecraft interfacing. Integrated thermistors and polyimide heaters allow for thermal control. Radiation tolerant battery interface electronics (BIE) provide a storage inhibit in addition to over-voltage, over-current, and under-voltage protection. The chassis design enables mechanical integration in either horizontal or vertical orientations. This battery module is compatible with 28-Volt power systems including the Ibeos E28-200 SmallSat EPS.

HORIZONTAL RAIL MOUNTED

VERTICAL PANEL MOUNTED



SPECIFICATIONS

Dimensions	94.5 x 88.7 x 51 mm
Mass	< 850 g
BOL Capacity	135 Whr
Sustained Discharge Rate	10 A
Recommended Charge Rate	2.5 A
Voltage	22 V to 33.6 V
Recommended Operating Temperature	0 to 45° C
Heater Power @ 28V	20 W
Single Event Effects	Operate through: LET > 37 Survive: LET > 55
Total Ionizing Dose	30 kRad (Si)

PACKAGING

- Side or vertical mounting
- Aluminum chassis and PEEK cell capture plates
- External aluminum surfaces treated with MIL-DTL-5541 Type II, Class 3 (Chem Film)
- 2X Custom cartridge heaters

BUILT-IN PROTECTION

- Over-voltage, under-voltage
- Over-current charge and discharge
- Remove-before-flight inhibit

MODULARITY & SCALABILITY

- Modules can be connected in parallel to meet energy storage or charge/discharge current requirements.

ELECTRICAL INTERFACE

- 21-Pin Micro-D connector
- Connections for
 - Protected power
 - Cell voltage sense
 - Heaters
 - Inhibit
 - PT1000 RTD sensor (potted on central cell)