

Battery (BAT) - 110

The BAT-110 is a modular battery system for satellites. It is based on the Lithium Ferro Phosphate (Li-FePO₄) cells. Li-FePO₄ battery technology offers 10x more cycles over Li-Io or Li-Po batteries and it is significantly less hazardous. The battery block is protected from overcharging (non-destructive), tolerant against deep discharge (non-destructive) and offers cell balancing.



BATTERY (BAT) - 110

Characteristics	Description
Size	240 x 119 x 87 mm ³
Weight	3000g
Nominal Voltage	23.1 V
Capacity	172Wh
Storage Temperature	-30°C to +50°C
Operating Temperature	-20°C to +40°C
Design Life	5 years LEO Tested for >30000 Cycles @ 1C & 10% DoD
Space Heritage	TRL9
Radiation Test (Co60)	30 krad
Configuration	7S 6P
Additional Configuration	7S 1P 7S 3P

Detailed Capabilities		Description
Power Drawn		
Peak @ 4 deg. C		<690W
Recommended @ 1 deg. C		<170W
Deep Discharge Tolerance		Non-destructive external protection Recommended (Schmitt trigger)
Charging		
Peak		<2.5A per string
Recommended		<1.0A per string
Over Charge Protection		Non-destructive & resettable shunt
Lifetime		
Accelerated Lifetime Testing		3000 Cycles @ 1C charge / discharge & 100 % DoD Result: <3% Capacity fade
Modularity		
Voltage		23.1V standard Scalable for 12V, 15V, 18V, 28V
Capacity		2.5Ah per string, 1-10 strings