



Category: Storage with Management

24VDC Li BOS 2000

Item # 20-0205196

Power Balance

The 24VDC Lithium Balance of Systems (BOS) 2000 provides a single case solution for energy storage and power management. It employs a 6T format LiFePO₄ battery to supply 2.1 kWh of energy storage while also satisfying up to 3 kW of DC power needs. The Li BOS 2000 comes equipped with DC, Solar and universal AC input as well as 100 A of battery voltage output through a NATO receptacle.

How a BOS Works

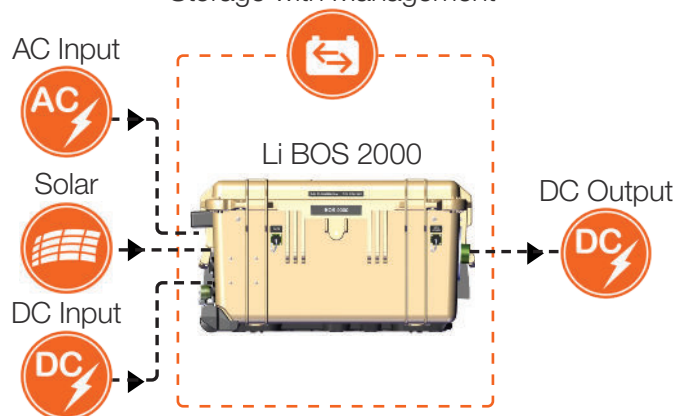
The Li BOS 2000 accepts AC, DC, or Solar power input to charge the internal battery. It can include Auto-Generator Start/Stop capability to automatically turn on/of various generators for battery recharge based on programmable settings. The Li BOS distributes available power from the charged battery to power DC loads. The Li BOS provides up to 100 A of nominal 28 VDC power. The Li BOS can plug and play with additional energy storage modules (ESMs) for increased battery only runtime.



Features

- 2.0 kWh of usable energy storage for up to 3000 charge/discharge cycles
- Multiple power scavenging capabilities to charge internal batteries
 - Accepts 15 A of universal AC power processing
 - Accepts 580 W of solar power generation
 - Accepts 150 W from other sources in the 9 – 36 VDC range
- Networkable battery monitoring via J1939 CAN bus
- 5-stage Stage of Charge (SOC) indicator on E-ink display
- Battery built-in test (BIT) at start-up and operation
- Battery has internal protection for overcharge, over-discharge, overload and short circuit
- 100 A battery voltage output IAW MIL-STD-1275E
- 100 A input/output port for energy storage expansion/charging or optional accessories interface
- Serves as a power filter/conditioner by cleaning up dirty power
- Designed to MIL-STD-810H and ruggedized for operation in harsh environmental conditions
- Transportable by land, sea, and cargo aircraft

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General	
Battery	LiFePO ₄
Nominal Voltage	24 VDC
Nominal Capacity	2.0 kWh (82 Ah)
Max Charge/Discharge Rate	100 A continuous
Self-discharge Rate*	<5% per month
Cycle Life*	≥ 3000 Cycles to 80% State of Health
Shelf Life*	<ul style="list-style-type: none"> • 5.6 years to 80% State of Health • 7.0 years to 75% State of Health
Battery Voltage Range	24.4 - 29.9 VDC (Programmable)
Internal cooling	Forced convections with internal fans; (2) Intake and (2) Exhaust
User Interface	E-Ink Display
AGS Compatibility	Novatio
Case**	Pelican 1620
Transportation	UN3481 Lithium-ion battery contained in equipment
Warranty	1-year materials and workmanship

*@ 77 °F/ 25 °C

** Standard color: tan; Optional color: black

Charge Controller Specifications (@77 °F/25 °C)	
Maximum PV Input Voltage	100 VDC
Maximum PV Input Current	20 A
Maximum PV Power	580 W
Efficiency	98% (peak)
Charging Voltage	29.5 V (Programmable)
Charging Stages	Bulk, absorb, float
Charge Control Method	Maximum Power Point Tracking (MPPT)

AC Charger Specifications (@77 °F/25 °C)	
Input Voltage	90-305 VAC
Input Frequency	47–63 Hz
Charging Stages	CC/CV
Continuous DC Output Current	42 A
Charging Efficiency	95%

Safety	
Battery and User	Multiple battery internal SW and HW protections
Breaker(s)	<ul style="list-style-type: none"> • (1) Battery Breaker (ON/OFF), 2P 100 A • (1) DC In/Out Expansion, 1P 100 A • (1) Solar Input, 1P 30 A • (1) 9 – 36 VDC Input, 1P 20 A • (1) Universal AC Input, 1P 15 A • (1) DC Output, 1P 100 A
Fuse(s)	2A for USB output
Ground Fault	Grounding lug for connection to earth ground
Certifications	<ul style="list-style-type: none"> • UN 38.3 • Designed to MIL-STD-810H • Compatible with MIL-STD-1275E

Connections	
Input(s)	<ul style="list-style-type: none"> • (1) 9-36 VDC, 150 W (Cannon CB2-18-10PC) • (1) Solar (Cannon CB2-22-2SC) • (1) Universal AC (Schurter 6100-3300-32)
Output(s)	<ul style="list-style-type: none"> • (1) 24 VDC NATO receptacle • (1) USB 5V, 2.1 A (type-A)
Input/Output(s)	<ul style="list-style-type: none"> • (1) ESM Expansion, 24 VDC, 100 A (Deltran 224-0061-BK) • (1) Gen Comm port for generator interface • (1) Tech port for battery communication

Environmental	
Operating Temperature***	-4 °F to 122 °F (-20 °C to +50 °C)
Storage Temperature****	-50.8 °F to 159.8 °F (-46 °C to 71 °C)

***Chargers derate above 30 °C

****Sustained high temperature storage will reduce battery life

Weights and Dimensions (L x W x H)	
Weight	100 lb (45.4 kg)
Dimensions	24.76 x 19.57 x 13.90 in (62.9 x 49.7 x 35.3 cm)

Recommended Components and Accessories



Li ESM 2000
Item # 21-0202317



Solar Venture 320W
Hard Case Item # 19-1000012
Soft Case Item # 19-1000013

