



SOLAR STIK®

Category: Storage with Management

24VDC Li BOS 2000-120

For Novatio 1kW/2kW – Item # 20-0205200

For Honda 1kW/2kW – Item # 20-0205195

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 2.0 kWh of energy storage while also satisfying both AC and DC power needs. The Li BOS 2000 comes equipped with DC and Solar, and universal AC input as well as AC, DC, and USB output connections. The Li BOS can be operated in any of 3 modes, depending on available input power sources: autonomous mode—solar only; hybrid mode—solar and fuel-driven generator; or uninterruptible power supply (UPS) mode—grid power.

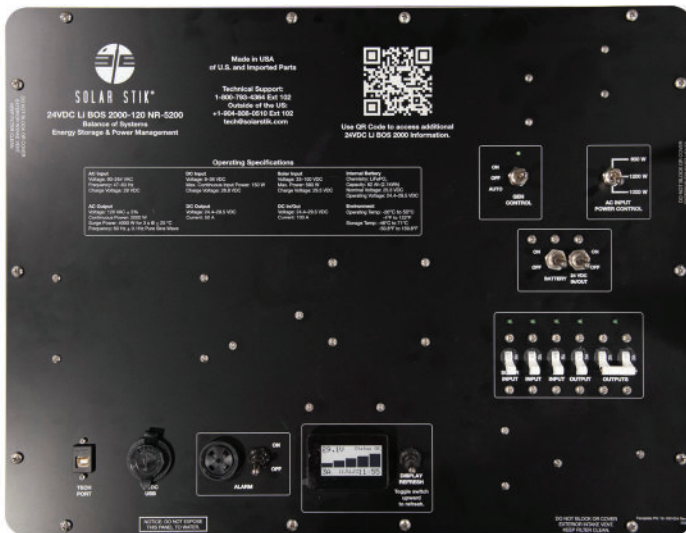
How a BOS Works

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. After bringing power into the battery, the Li BOS then converts battery power to usable 120 VAC or 24 VDC power for distribution to electric loads. The Li BOS provides up to 1400 W of DC power and 2000 W continuous, 4,000 W surge of AC power meaning it can power almost any electronic load that has a standard AC “wall outlet” connection. With over 82 Ah of energy storage that can cycle up to 3000 times, the Li BOS can power loads for several hours from battery power alone. 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 10 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-Link display
- Battery built-in test (BIT) at start-up and operation
- Battery has internal protection for overcharge, over-discharge, overload and short circuit
- Up to 2000 W continuous of 120 VAC output power via two convenience receptacles
- 50 A battery voltage output IAW MIL-STD-1275E
- 100 A input/output port for energy storage expansion or optional accessories
- 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



Li BOS 2000 faceplate

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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	<ul style="list-style-type: none"> • Novatio 1kW/2kW (Item # 20-0205200) • Honda 1kW/2kW (Item # 20-0205195)
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

Inverter Specifications (@77 °F/25 °C)

Nominal AC Output Voltage	120 VAC ± 5%
Rated Current	16.7 A
Output Frequency and Accuracy	60 Hz ± 0.1 Hz
Continuous Output Power	2000 W
Efficiency	>88%
Waveform	Pure sine wave
Max Surge Power	4000 W for 3 seconds

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 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 50 A • (1) AC Output, 1P 20 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"> • (2) 120 VAC (NEMA 5-15/20R) • (1) 24 VDC, 50 A (Cannon CB2-20-19SC) • (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)

***Inverter & charge controller derate above 30 °C

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

Weights and Dimensions (L x W x H)

Weight	112 lb (50.8 kg)
Dimensions	24.76 x 19.57 x 13.90 in (62.9 x 49.7 x 35.3 cm)

