Energy Insurance for your family

BINE IS UNATANCE FOR YOUR FAMILY



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SOL-ARK 8K

More Affordable: 5-15% less solar panels & 5-20% less batteries than others!

World's Most Efficient Battery Inverter



S&P GLOBAL PLATTS GLOBAL ENERGY AWARDS 2018 FINALIST



Sales@FortressPower.com

877-497-6937

Battery Solar made Affordable



Wiring Knockouts & WiFi

- Auto-Generator Start
- PV Rapid Shut Down
- External current sensors
- Battery communication

Cround Breaking Efficiency

		Outback	Pika	SolarEdge		Outback	Schneider	Sonnen	Magnum	Tesla 2x
	Sol-Ark	Skybox	X7600 +	7600A +	Darfon	Radian	XWPro6.8 +	ECO-16	2x4448PAE	Powerwall2
Brand & Model	8K	SBX5048	4xS2500	32xP400	2xH5001	FPR-8048A	2×MPPT80	+ String Inv	+16×GT500	+ String Inv
MSRP Price	\$6,500	\$6,500	\$6,500	\$5,500	\$6,500	000 ' 6\$	\$8,700	\$28,500	\$12,000	\$29,000
	9KW			7.6KW						
Inverter Continous Power	(8KW)	5KW	7.6KW	(Batt=5KW)	2x5.5KW	8KW	6.8KW	8KW	2x4KW	2x5KW
Off Grid Inverter Power peak (5s)	20KW	SKW	12KW	6.6KW	13KW	12KW	12KW	12KW	17KW	14KW
System Idle Power	60W	140W			200W	76W	48W	60W	58W	78W
AC to DC Charger	185A	100A	6.7KW	5KW	120A	115A	140A	115A	120A	N/A
	color	color						color		
User Interface	touch	touch	Text	Text	Text	Text	Text	touch	Text	×
PV to Batt Efficiency @ 65%	97.5%	81.0%	92.0%	91.0%	91.0%	97.5%	96.0%	82.0%	80.5%	92.5%
AC to Batt Efficiency @ 65%	96.0%	80.0%	93.0%	91.0%	%0.06	85.0%	91.5%	85.0%	85.0%	95.0%
Batt to AC Efficiency @ 65%	95.5%	94.5%	93.0%	88.0%	%0'06	93.0%	92.5%	93.0%	91.0%	95.0%
On Grid PV to AC Efficiency @ 65%	96.5%	94.0%	95.5%	96.5%	95.5%	90.2%	88.5%	97.0%	95.5%	97.0%
Off Grid or Time of Use										
PV -> Batt -> AC <i>Losses</i> @ 65%	7%	24%	15%	21%	19%	10%	12%	25%	30%	13%
	Fortress		380V	380V	optional					
	18.5KWh LFP	26KWh	20.3KWh	9.8KWh	20KWh	26KWh	26KWh	included	26KWh	included
Battery Bank	+\$11.6K	+\$7.2K	+\$15K	+\$7K	+\$11K	+\$7.2K	+\$7.2K	16KWh LFP	+\$7.2K	26.4KWh
UPS Grid Failure Transfer Time	4ms	20ms	1000ms	2000ms	20ms	8ms	8ms	100ms	16ms	2000ms
Low Cost Easy Install	*	1	Х	×	1	×	×	Х	Х	X
Warranty electronics	5/10 yr	5/10 yr	10 yr	12/20/25 yr	5/10 yr	5/10 yr	5 yr	10 yr	5 yr / 25yr	10 yr
NEC UL1699B Arc Fault	>	1	1	>	Х	1	×	1	1	>
AC Coupling to Micro/String Inverters	1	X	Х	1	X	1	1	1	1	>
Parallel Stacking	X	1	Х	×	1	>	1	X	1	>
UL1741SA / Rule 21 (California / Hawaii)	>	>	1	>	1	>	>	1	Х	×

Battery Solar made Simple

POWERFUL

9,000W continuous for On Grid production & 20,000W peak Off Grid for starting 3 ton A/C or well pumps

FLEXIBLE

◊ Grow as you go. Sol-Ark 8K works with 5-36 Solar panels (up to 11KW) and 0-32 Batteries

EMP/CME/LIGHTNING PROTECTION

o Protect your system and appliances from EMP/Solar Flare/Lightning at 2X military requirements

GRID-TIED, HYBRID OR OFF-GRID

- Simultaneously manages power to/from Solar, Battery, Grid, Load, and Generator
- Grid Tied Mode: Sell your power to reduce your electric bill
- Meter Zero Mode: Zero your electric bill without a smart meter
- **Time of Use:** Use solar and batteries to minimize grid power usage when its most expensive
- ◊ Smart Load: Use a programable output for high power off-grid items or Grid time of use items to run only when there is a lot of Solar (hot water, A/C, pumps, dehumidifier)
- AC Coupling: Compatible with up to 7kW of AC input
- Peak Shaving: Reduces your peak power demand from the grid

SIMPLE TO INSTALL & USE

- Few external components for faster install
- Easy to understand touchscreen interface

Wireless Monitoring & Remote Software updates











Lithium Solar Batteries

- High visibility: LCD Display showing Voltage; Remaining capacity; AC output; State of Charge
- Capacity: 360AH (48V)
- Power: 18.5KWH 16.5KWH (usable)
- More Power: 8 batteries in parallel to 1 inverter (132 KWH)
- Nominal Voltage: 51.2V
- Long Life: 6000 Cycles @ 80% (16 Years)
- Charge Current: 150A
- Discharge Power: 160 A (8kW)
- Surge Power: 12 KW for 10 Sec
- Price: \$11,600
- 10 Year Warranty

New: Fortress eVault 16.5





• Connecting battery communication for voltage monitoring and balancing

Using same length cables

The voltage difference between each battery < 2 V





Sol-Ark-8K-48-ST Specifications

Solar		
Max allowed PV Power	11000W	
Max allowed PV Power per MPPT	6000W	
Max DC voltage	500V	
MPPT voltage range	150-425V	
Starting voltage	175V	
Number of MPPT	2	
Solar Strings per MPPT	2	
Max DC current per MPPT	18A (self limiting)	
Max AC Coupled Input (Micro/String Inverters)	7,000W	
Max Combined Solar Input (DC+AC)	13,000W	
AC Output		
Connections	120/240V split phase	
	9000W 37.5A L-L (240V)	
Continuous AC power on Solar or Battery	4800W 40A L-N (120V)	
	20,000VA L-L (240V)	
Surge AC power 5sec	10,000VA L-N (120V)	
Frequency	60/50Hz	
	12000W 50A L-L (240V)	
Continuous AC power with Grid or Generator	6000W 50A L-N (120V)	
CEC Efficiency	96.5% (Peak 97.5%)	
Idle Consumption typical – no load	60W	
	Limited to Household or	
Sell back power modes	Full Grid-Tied	
Design (DC to AC)	Transformerless DC	
Response Time (Grid-Tied to Off-Grid)	4ms	
Power Factor	+-0.9 - 1.0	
Battery (optional)		
Туре	Lead-Acid or Li-Ion	
Nominal DC Input	48V	
Capacity	90 – 2000Ah	
Voltage Range	41.0 – 59.0V	
Continuous Battery charging output	190A	
Charging curve	3-stage w/ equalization	
Grid to Battery Charging Efficiency	96.0%	
External temperature sensor	included	
Current shunt for accurate % SOC	integrated	
External Generator Start based on voltage or % SOC	integrated	
Communication to Lithium battery	CanBus & RS485	

General		
Dimensions (H x W x D)	28.0" x 17.375" x 9.37"	
Weight	75 lbs	
Enclosure	NEMA type 1 (Indoor Use)	
Ambient Temperature (4 variable speed fans)	-25 to 55C, >45C derating	
Display	Color touch screen	
Wi-Fi Communication (monitoring or SW updates)	integrated	
Snap on sensors for limited selling to Household	included	
Standard Warranty	5 years	
Optional Extended Warranty	10 years	



Protection & Certifications	
Electronics certified safety by SGS labs to NEC	
& UL specs – NEC 690.4B & NEC 705.4/6	Yes
Grid Sell Back – UL1741-2010/2018,	
IEEE1547a-2003/2014, FCC 15 class B, (April	
2019: UL1741SA, CA Rule 21, HECO Rule 14H)	Yes
PV DC disconnect switch – NEC 240.15	integrated
Ground Fault Detection – NEC 690.5	integrated
PV rapid shutdown control – NEC 690.12	integrated
PV Arc Fault detection – NEC 690.11/	
UL1699B	integrated
PV input lightning protection	integrated
AC input/output 50A breakers	integrated
Battery overcurrent fuse	integrated
User wiring enclosure w/ ¾" & 1″ knock-outs	integrated
Solar Flare/EMP Hardened to 2015 MIL-STD-	
461G (Independently tested June 2018)	optional