



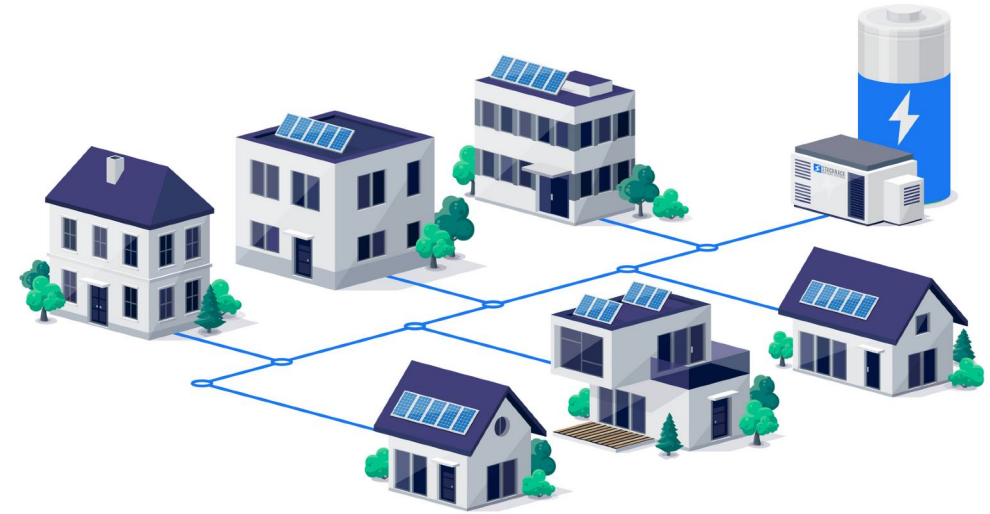
Residential | Commercial | Utility Scale

Products & Technical Documents



Our Solution

Our battery systems at homes, businesses and utility sub-stations will drastically reduce transmission costs, avoid costly transmission line upgrades, increase renewable energy adoption, improve grid resiliency and encourage EV adoption.



Residential

The SR30K is scalable battery system capable of providing >90% self consumption for the average US home.

Commercial

The SRBOX and SRBLOCK provide reliable high-voltage battery storage for businesses and EV charging stations

Utility Sub-Stations

The SRC-2000 is an advanced containerized battery solution for utility substations to support voltage, frequency and rapid demand changes.



Residential



SR30K + Luxpower 12K

a Complete Residential Energy Solution

Every home uses energy differently. The SR30K has a modular, plug & play design that reduces installation time and cost. The battery cabinet is outdoor-rated and pre-assembled with all necessary cables and components. The advanced bi-directional hybrid inverter efficiently manages home energy, including solar and battery.

Plug & Play Design

Install up to 6 batteries (30 kWh). The pre-assembled cabinet comes with busbars and all necessary cables to reduce installation time and commissioning.

Closed-Loop Communication

Batteries and inverter communicate directly with one another for optimal safety and performance.

Outdoor-Rated

Safely install outdoors. Add optional heaters & AC units for extreme climates.

Safety

The system is certified to the highest safety standards, including UL1973, UL9540 and UL9540A. Each battery includes dual on-board fire arrestors. Emergency shutdown feature turns off the inverter and batteries with the push of a button.

Temperature-control

Each cabinet includes automatic cooling fans. Battery module heaters, cabinet heaters and AC units are optional accessories that be added for systems in extreme climates.





SR30K + Luxpower 12K

Solar

| | |
|---|------------|
| Max Allowed PV Power | 18000W |
| Max DC Voltage (Voc) | 600V @ 25A |
| MPPT Voltage Range | 230-500V |
| Starting Voltage | 125V |
| Number of MPPT | 3 |
| Max Solar Strings Per MPPT | 2/1/1 |
| Max DC Current per MPPT (Self Limiting) | 26/15/15A |
| Max AC Coupled Input (Micro/String Inverters) | 21,600W |

AC Output Power

| | |
|---------------------------------------|----------------------------------|
| Connections | 120/240/208V Split Phase |
| Continuous AC Power with PV | 12,000W 50A-L (240V) |
| Continuous AC Power to Load | 12,000W 50A-L (240V) |
| Surge AC Power 5min | 16,000VA L-L (240V) |
| Surge AC Power 500ms | 20,000VA L-L (240V) |
| Parallel Stacking | Yes |
| Frequency | 60/50Hz |
| CEC Efficiency | 96.5% (Peak 97.5%) |
| Idle Consumption Typical—No Load | 90W |
| Sell Back Power Modes | Limited to House/Fully Grid-Tied |
| Design (DC to AC) | Transformerless DC |
| Response Time (Grid-Tied to Off-Grid) | 5ms |
| Power Factor | +/- 0.9 - 1.0 |

General

| | |
|---------------------------------|-------------------------------|
| Inverter Dimensions (H x W x D) | 34.2" x 20.5" x 11.2" |
| Cabinet Dimensions (H x W x D) | 81.9" x 26.8" x 32.7" |
| Inverter Weight | 121 lbs |
| Cabinet Weight with Batteries | 1694 lbs |
| Inverter Enclosure | NEMA 3R |
| Cabinet Enclosure | NEMA 3R |
| Ambient Temperature (Inverter) | -13 to 131°F, >113°F Derating |
| Inverter Installation Style | Wall-Mounted |
| Cabinet Installation Style | Floor-Mounted |
| Cabinet Fixation | Concrete Lag Bolts (4x 3/8") |
| Wi-Fi & LAN Communication | Included |
| Standard Warranty | 10 Years |

Battery

| | |
|-------------------------------------|---------------------------------------|
| Type (Chemistry) | Lithium Iron Phosphate (LiFePO4) |
| Nominal Voltage: | 51.2 VDC |
| Voltage Range: | 47.5 to 58 VDC |
| Nominal Capacity: | up to 1200 Ah (600 Ah / cabinet) |
| Nominal Energy: | up to 61.44 kWh (30.72 kWh / cabinet) |
| Usable Energy | up to 55.3 kWh (4.6 kWh / module) |
| Peak Discharge Rate: | 62.64 kW @ 15s (1C) (5.22 kW/module) |
| Maximum Continuous Discharge Rate: | 600 A (30.72 kW DC) (50A/module) |
| Standard Continuous Discharge Rate: | 600 A (30.72 kW DC) (50A/module) |
| Maximum Continuous Charge Current: | 600 A (50A/module) |
| Standard Continuous Charge Current: | 600 A (50A/module) |
| Round-Trip Efficiency: | ≥95% |
| Communication Protocol: | RS232, RS485, CAN |
| Battery Connection Type: | Parallel |
| Cycle Life: | ≥6000 cycles @ 90% DOD |
| Battery Lifespan: | ≥15 years |
| Temperature Range for Charging: | 32 to 122°F |
| Temperature Range for Discharging: | 14 to 122°F |
| Ambient Temperature for Operation: | 32 to 95°F |
| Conduit Knockouts: | 2" (3x) per cabinet |

Protections & 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, UL1741SA, | Yes |
| • Certified to UL9540:2020 | 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 | Integrated |
| • PV Input Lightning Protection | Integrated |
| • PV String Input Reverse Polarity Protection | Integrated |
| • AC Output Breakers - | Integrated |
| • 200A Battery Breaker / Disconnect | Integrated |
| • Surge Protection | DC & AC Type II |



“StackRack has the best system on the market and its the one I'll be using for my NEM 3.0 customers. They made it so simple to install and the cabinet comes with all the cables I needed. Customer service is great. You can actually speak to a real human being.”

Solar Pros

“Installing the batteries and cabinet was the easiest part of the install. We had a small issue with a communication cable but StackRack sent me a new one right away. Their customer service is great. They always picked up the phone and helped me get the batteries communicating with the inverter and the system programmed the right way.”

Mid Matthews Construction

“The installation was about 30% cheaper and went in about 30% faster. It's a win on both for StackRack.”

XPX Solutions

How We Stack Up

to other residential systems

| | SR30K + Luxpower 12K | Tesla Powerwall 2 | Enphase Encharge 10 | Generac PWRcell |
|--------------------------------|-------------------------------|-------------------|---------------------|-----------------|
| Off-Grid Power | 12kW | 5kW | 3.84kW | 7.6kW |
| PV to Battery to AC Efficiency | 93% | 87% | 85% | 87% |
| Solar Connections | AC & DC coupling | AC coupling | AC coupling | AC coupling |
| Automatic Temperature Control | Yes | No | No | No |
| Generator Charging | Yes | No | Yes | No |
| User Interface | LCD screen | None | None | None |
| Remote Monitoring | Yes | Yes | Yes | Yes |
| Balance of Systems | Cables & Conduit Box Included | Extra | Extra | Extra |
| Warranty | up to 15 years | 10 years | 15 years | 10 years |

SR50K

for larger residential & light commercial

The SR50K is an outdoor-rated, battery storage system that includes LFP battery modules & temperature-controlled HVAC system. Connect multiple units together for larger systems.

Fully-Integrated

Pre-assembled battery cabinet allows you to slide and secure batteries. Included busbars simplify connections and safety. Mount the inverter on the cabinet for an all-in-one solution.

Expandable

Connect up to 6 battery cabinets per inverter

Safety

The system is certified to the highest safety standards, including UL1973, UL9540 and UL9540A. Each battery includes dual on-board fire arrestors. Emergency shutdown feature turns off the inverter and batteries with the push of a button.

Temperature-Control

Temperature controlled fans and optional 1000W heater/AC unit ensure safe and optimal operation in all environments.

Outdoor-rated

IP55 (NEMA 3R) outdoor-rated battery cabinet and inverter





SR50K Specifications

| | |
|-------------------------------------|--|
| Type (Chemistry) | Lithium Iron Phosphate (LiFePO4) |
| Battery Module: | SR5K-UL |
| Number of Battery Modules: | up to 10 |
| Nominal Voltage: | 51.2 VDC |
| Voltage Range: | 47.5 to 58 VDC |
| Nominal Capacity: | up to 1000 Ah |
| Nominal Energy: | up to 51.2 kWh |
| Usable Energy: | up to 46 kWh (4.6 kWh / module) |
| Peak Discharge Rate: | up to 52.2 kW @ 15s (1C) (5.22 kW/module) |
| Maximum Continuous Discharge Rate: | up to 500 A (30.72 kW DC) (50A/module) |
| Standard Continuous Discharge Rate: | up to 500 A (30.72 kW DC) (50A/module) |
| Maximum Continuous Charge Current: | up to 500 A (50A/module) |
| Standard Continuous Charge Current: | up to 500 A (50A/module) |
| Round-Trip Efficiency: | ≥95% |
| Communication Protocol: | RS232, RS485, CAN |
| Battery Connection Type: | Parallel |
| Cycle Life: | ≥6000 cycles @ 90% DOD |
| Battery Lifespan: | ≥15 years |
| Enclosure Dimensions (H x W x D): | 81.89" (H) x 26.77" (W) x 32.68" (D) |
| Cabinet Weight with Batteries: | up to 1694 lbs |
| Cabinet Enclosure Rating: | IP55 |
| Cabinet Installation Style: | Floor-mount |
| Temperature Range for Charging: | 32 to 122°F |
| Temperature Range for Discharging: | 14 to 122°F |
| Ambient Temperature for Operation: | 32 to 95°F |
| Conduit Knockouts: | 1.5", 1.0" (2x), 0.75" (2x) |
| Certified Model Numbers: | SR5K-UL Battery Module (UL1973) SR5K-UL Battery Module / Sol-Ark 15K (UL9540) |

Commercial & Utility Scale



SRBOX-200

SRBLOCK-200

SRC-2000

Advantages

- Modularly and flexibly expandable system at capacity level
- DC-coupled solution, compatible with different inverters
- Outdoor housing for any installation site
- Easy maintenance due to modular design (Battery modules, BMS, control design)
- Internal and external protection
- Remote control

- Modularly and flexibly expandable system at the power and capacity levels
- All-in-one design, AC-coupled solution
- Outdoor housing for any installation site
- Easy maintenance due to modular design (Battery modules, BMS, control design)
- Internal and external protection
- Suitable for series application such as control reserve, self-consumption increase
- 15 years of design life, stable performance, maintenance free

- Modularly and flexibly expandable system
- Integrated with multi-level fire-fighting and intelligent protection
- Individual energy content perfectly matches your requirements
- Each battery string has an independent temperature control system to ensure maximum system life
- Intelligent control, in-time monitoring
- Non-walk-in container, full cabin shipping, saving on-site construction work
- Internal and external protection
- 15 years of design life, stable performance, maintenance-free

Application Scenarios

- Self consumption of renewable energy
- Power boost and EV charging optimization
- Peak shaving
- Back-up and off-grid

- Self consumption of renewable energy
- Power boost and EV charging optimization
- Peak shaving
- Back-up and off-grid

- Large wind & solar power station
- Independent energy station
- Utility sub-station
- Peak shaving
- Large micro-grid

SRBOX-200

for Commercial, Industrial & EV Charging

The SRBOX-200 is an outdoor-rated, DC-coupled battery storage system that includes LFP battery modules, HVAC & fire suppression system, along with remote monitoring. Connect multiple units together for larger systems.

Modular Design

Pre-assembled cabinet simplifies battery module installation and maintenance.

Connect Multiple Units Together

Modular design allows for simple scaling from 200 kWh to 2 MW or more.

Integrated Fire Suppression & HVAC Systems

Fire Suppression meets NFPA 855 standards and ventilation meets NFPA 69 standards to keep units safe and operating at optimal temperature.

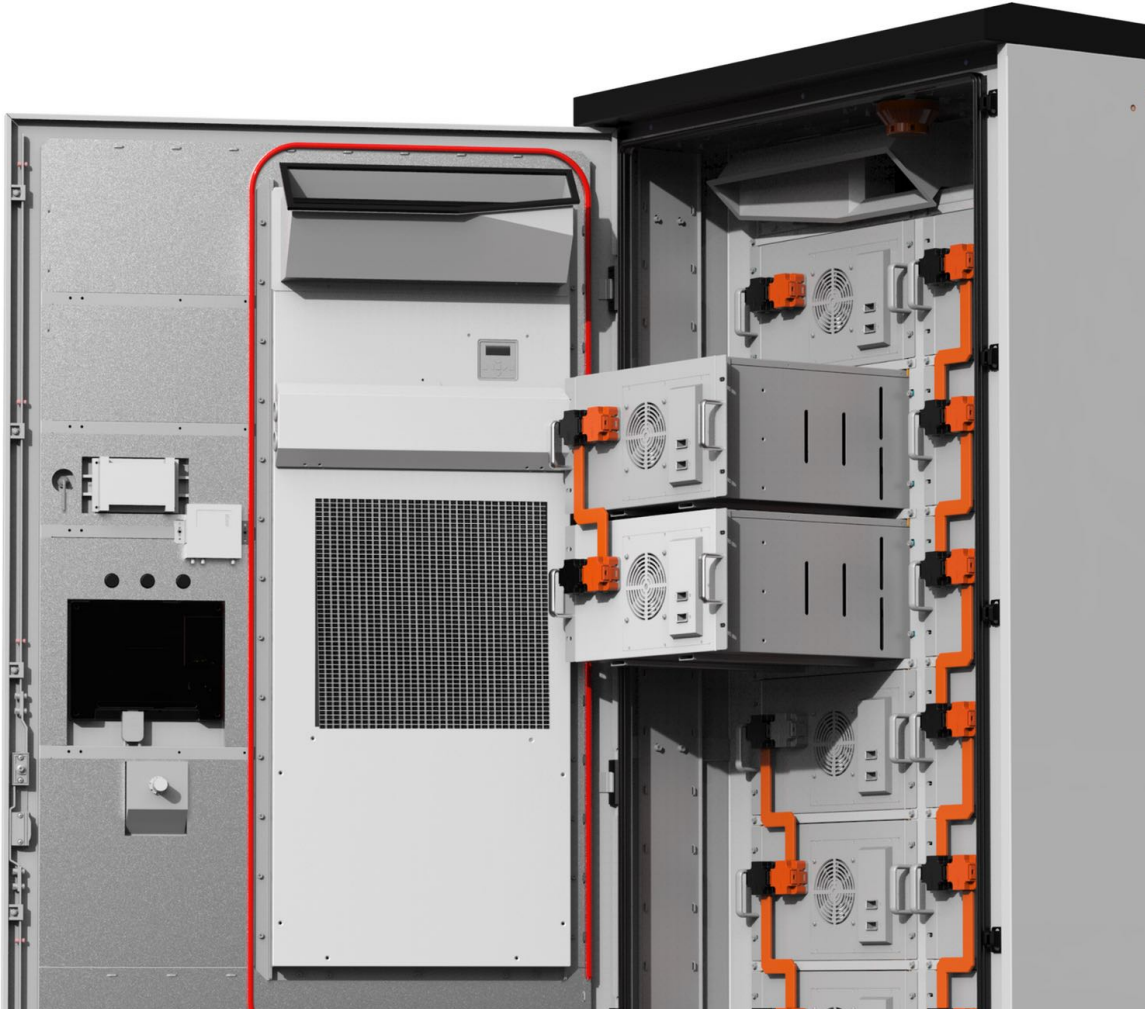
Safety

The system is certified to the highest safety standards, including UL1973 and UL9540A. Each battery includes dual on-board fire arrestors.

Warranty

10 year standard warranty with optional 15 year warranty.





SRBOX-200 Specifications

| | |
|------------------------------------|---|
| Battery Chemistry | Lithium Iron Phosphate (LiFePO4) |
| Rated Voltage (V) | 250~800 |
| Rated Capacity (Ah) | 280 |
| Rated Charge/Discharge Current (A) | 140/140 |
| Rated Energy (kWh) | 50~200 |
| Maximum Discharge Current (A) | 200 |
| Standard Discharge Current (A) | 50 |
| Maximum Charge Current (A) | 200 |
| Standard Charge Current (A) | 50 |
| Dimensions: W*D*H | 43.3*43.3*92.1 |
| IP Rating | IP54 |
| Total Weight (lbs) | 5070 |
| Cooling | Integrated HVAC |
| Fire Suppression | Integrated |
| Operating Temperature (°F) | -4 to 122 |
| Operating Humidity | 5%~95% Relative Humidity |
| Communication | CAN/RS485/Modbus TCP/IP |
| Parallel | 10 |
| Safety & Certification | IEC62619, UN38.3 UL1973, UL9540A (pending) |

SRBLOCK-200

for Commercial & EV Charging

The SRBLOCK-200 is an outdoor-rated, energy storage system that includes a bi-directional inverter, LFP battery modules, HVAC & fire suppression system, along with remote control.

Fully-Integrated

Inverters and batteries stack securely in an all-in-one outdoor-rated battery cabinet.

Modular Components

Stack up to three 30 kW inverters and three 45 kW DC-chargers to design the right system for the project.

Fire Suppression & HVAC Systems

Fire Suppression meets NFPA 855 standards and ventilation meets NFPA 69 standards to keep units safe and operating at optimal temperature.

Safety

The system is certified to the highest safety standards, including UL1973 and UL9540A. Each battery includes dual on-board fire arrestors.

Remote Monitoring

Monitor, program and update the firmware remotely.



SRBLOCK-200 Specifications

Battery Parameter

| | |
|-------------------------|----------------------------------|
| Battery Chemistry | Lithium Iron Phosphate (LiFePO4) |
| Battery Capacity (kWh) | 50 to 200 |
| Voltage Range (V) | 320~800 |
| Max Charging Power (kW) | 30/100 |

AC On-Grid Parameter

| | |
|---------------------|----------------------------|
| Grid Type | 3P3W+PE |
| Input / Output (kW) | 30/60 |
| AC Voltage (V) | 480 |
| Grid Frequency | 55~65 |
| THDi | <3% (100% load) |
| Power Factor | 0.8~1 (Leading or Lagging) |

AC Off-Grid Parameter

| | |
|-----------------------------------|---|
| Rated Charge/Discharge Power (kW) | 30/60 |
| Max Output Power (kVa) | 33/66 |
| Rated AC Voltage (V) | 480 |
| Overload Capacity | 110~120%, 10 min; 120-130%, 1 min, >150%, 100 ms |

Photovoltaic Input

| | |
|------------------------|-------------------------------|
| Max Input Power (kW) | 45/90 |
| MPPT Voltage Range (V) | 200~750 (430~750 @ full load) |

General Parameter

| | |
|----------------------------|---|
| Dimensions: W*D*H (in) | 86.6*43.3*92.1 |
| Max. Weight (lbs) | 7055 |
| IP Rating | IP54 |
| Operating Temperature (°F) | -4 to 122 |
| Relative Humidity | 0~95% |
| Altitude | <6500 |
| Cooling Method | Integrated Air Conditioner |
| Noise (dB) | <75 |
| Fire Suppression System | Integrated |
| Communication | Ethernet, Modbus TCP/IP |
| Safety & Certification | IEC62619, UN38.3 UL1973, UL9540A pending |



SRBOX-200



SRBLOCK-200



INV-40KW-RM480V-3P

Parallel 10x up to 400kw



INV-35KW-RM4208V-SP

480 277 208
3-Phase
40kw

120/208VAC
3-Phase or
120/240 Split
Phase
35kw



The smaller SRB systems can be placed at point of use for commercial machinery demand shaving and backup

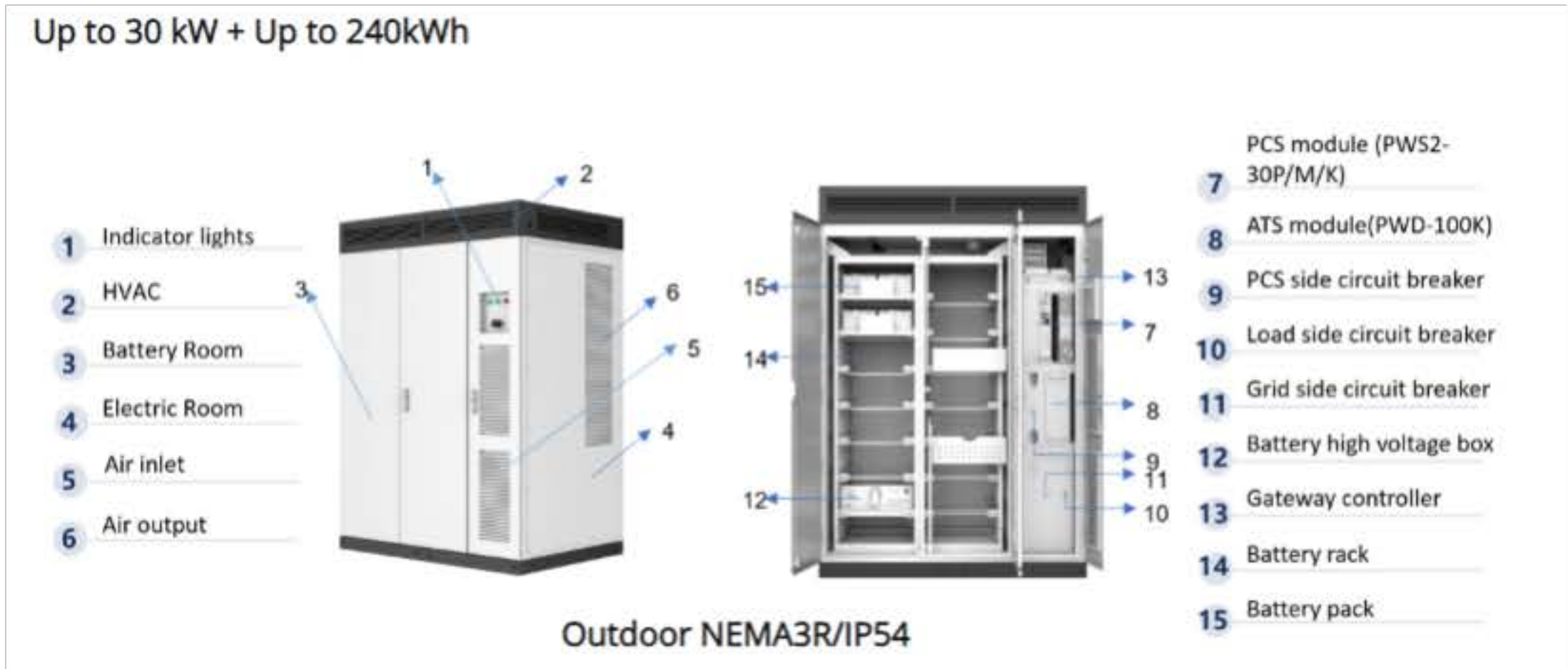


SRB Control PLC SCADA



SRB-SC-80kw

The SRB-SC-80kw a high discharge rate (2.0C) Super Capacitor in a small package for shorter duration power spikes, startups and peak demand shaving at point of use.



| | |
|---------|------------|
| Drawn | D.M. |
| Date | 08/17/23 |
| Drawing | SRB-DM0323 |

SRC-2000

for Utility Sub-Stations & Large-Scale Projects

An advanced containerized energy solution that includes real-time, remote system monitoring, multi-level fire suppression and independent temperature-controlled battery strings to ensure stable performance and maximum system life.

Pre-Assembled for Delivery

The entire system is assembled and tested prior to shipping to reduce installation cost and commissioning time

Advanced Engineering

Each system is designed with advanced components to maximize system efficiency, reliability and lifespan. Design life is over 15 years with daily use.

Dual Fire Suppression

Fire Suppression meets NFPA 855 standards and ventilation meets NFPA 69 standards. Each module has been tested to UL9540A standards and includes dual on-board fire arrestors.

Plug & Play Design

Includes all batteries, power conversion, transformer, safety features and controls to simply maintenance and maintain operability.





SRC-2000 Specifications

| | |
|------------------------------------|---|
| Battery Chemistry | Lithium Iron Phosphate (LiFePO4) |
| Rated Voltage (V) | 870.4 |
| Voltage Range (V) | 761.6~952 |
| Pack Model | SRB51280 |
| Rack Series | 17 |
| Rack Rated Energy (kWh) | 243.7 |
| Total Rack Quantity | 10 |
| Rated Power (kW) | 1000 |
| Rated Charge/Discharge Current (A) | 10*140 |
| Max Charge/Discharge Rate | <0.5C@77°F |
| Capacity (kWh) | 2437.12 |
| Dimensions: W*D*H (in) | 238.5*114.0*96.0 |
| Weight | <30T |
| IP Rating | IP54 |
| Working Temperature (°F) | -4 to 122 |
| Storage Temperature (°F) | -22 to 140 |
| Humidity Range | 0~95% |
| DC Lighting Protection | Type II |
| Max Working Altitude (ft) | <6500 ft |
| Battery Cooling | Industrial HVAC |
| Fire Suppression | Integrated |
| System Communication Ports | Ethernet / Optical Fiber |
| System Communication Protocol | Modbus TCP |
| Certifications | IEC62619, UN38.3 UL1973, UL9540a (pending) |



SRB Control PLC SCADA



SEL-651R Recloser Control Point-of-Common-Coupling Solution
 The SEL-651R Advanced Recloser Control is a safe and reliable way to interconnect distributed energy resources (DERs) or microgrids.

SEL-5030 acSELeator QuickSet Software
 Tool for engineers and technicians to quickly and easily configure, commission, and manage devices for power system protection, control, metering, and monitoring.



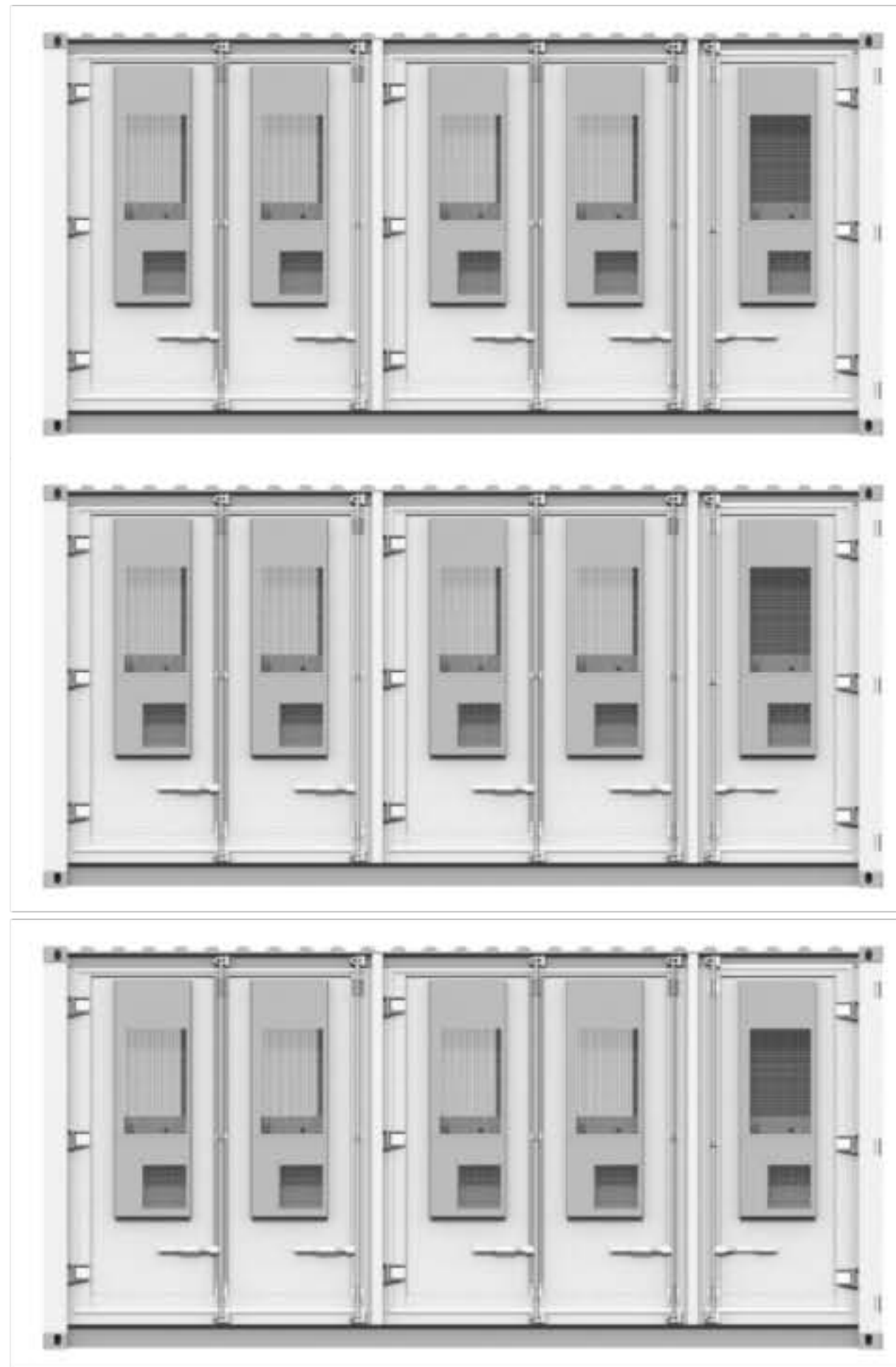
SR60K SRBOX-200

Comercial/Industrial 208 SP 277 - 480 3P

Residential 120/240



SR30K
 VPP Battery and App



45MWh 1000 Dwelling Solution or equivalent load of Commercial/Industrial
SRC-2000 Battery Energy Storage System -
 Each Unit - 2,236kWh Total Capacity (2 Megawatts)
 500kW Discharge Rate (0.25C)
 LifePO4 High Voltage 1331.2 Rated DC Voltage

SRB-IN-SX-500kw Inverter 800VDC to 480VAC
 Utility-interactive Mode
 Nominal power 500kVA

Typical Substation 15.4 MWh + Virtual Power Plant of 30MWh installed at 1000 residences.

| | |
|---------|---------------|
| Drawn | D.M. |
| Date | 10/08/23 |
| Drawing | SRB-DM-VPP-45 |

Capability

Company Overview

StackRack Battery, Inc., based in Corona, CA, is at the forefront of advanced energy storage solutions, specializing in state-of-the-art energy storage. Our mission is to revolutionize energy storage and integration, addressing the critical challenges identified by the National Renewable Energy Laboratory (NREL) in integrating distributed energy resources. StackRack Battery is committed to delivering high-performance storage solutions that power resilient Microgrids and Virtual Power Plants worldwide.



Product and Service Offerings

- **LiFePO4 Batteries:** Our lithium iron phosphate batteries offer unparalleled safety, stability, and longevity, with a cycle life of over 6,000 cycles. These batteries are ideal for a wide range of applications, from residential energy storage to large-scale utility projects.

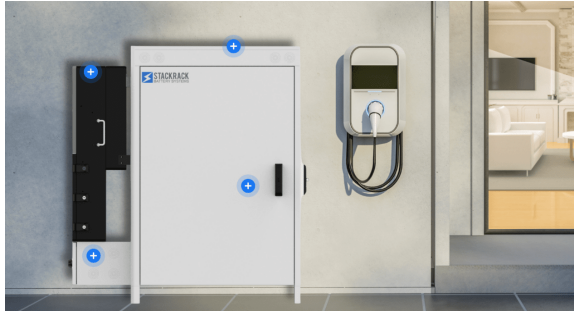
- **Graphene-based Supercapacitors:** At the cutting edge of energy storage technology, our Supercapacitors boast a remarkable cycle life of up to 20,000 cycles, providing rapid charging and discharging capabilities essential for high-demand applications.
- **Custom Energy Solutions:** Tailored energy storage systems designed to meet the specific needs of our clients, ensuring optimal integration with existing infrastructure and renewable energy sources.

Technology and Innovation

We blend the robustness of LiFePO4 batteries with the high-power of Graphene-based Supercapacitors, setting a new standard in energy storage and voltage regulation. We have patents and patents pending. Our control systems conform to industry security standards.

Applications and Use Cases

StackRack Battery's solutions are pivotal in building resilient Microgrids that ensure energy stability and security for communities and industries. Our technology is also instrumental in the development of virtual power plants (VPPs), aggregating distributed energy resources to enhance grid flexibility and reliability. This allows our utility customers to avoid costly transmission build out while hardening their existing infrastructure.



Compliance and Certifications

Our products meet the highest industry standards for safety, performance, and environmental sustainability. StackRack Battery is committed to continuous improvement and adherence to international certification standards.

Sustainability and Environmental Impact

We are dedicated to promoting sustainable energy solutions. Our products not only offer superior performance but also minimize environmental impact, supporting the global transition to a more sustainable and resilient energy infrastructure.

Global Reach and Partnerships

With a strong presence in Corona, CA, StackRack Battery is expanding its reach globally, forming strategic partnerships to innovate and deliver our advanced energy storage solutions worldwide.

Customer Support and Training

StackRack Battery provides extensive customer support ensuring that clients can maximize the benefits of our energy storage solutions. From technical support to operational training, we are dedicated to our clients' success. We have current capacity of 300MWh and currently working on expanding our supply chain to multiple GWs.

Contact Us

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