

# All-in-One Off-Grid Solar Power Energy Storage System

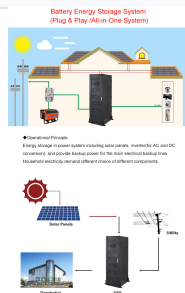
This all-in-one energy storage system is designed for off-grid solar power applications. It integrates battery storage, power conversion, and control functionalities into a single unit.



## ADDITIONAL IMAGES



## Overview



The system integrates solar panels, inverter conversion, and battery storage to provide reliable backup power.

## All-in-One Solar Energy Storage Solution

This integrated ESS provides a seamless plug-and-play solution for off-grid power, combining a 15kW low-frequency pure sine wave inverter, MPPT solar controller, and high-safety LiFePO4 battery storage. Designed for residential, commercial, and industrial backup, it features a standard 19-inch rack design for modular scalability and optimal performance. The system supports real-time monitoring via a mobile app and features an active balancing BMS to ensure a long working life of over 3500 cycles.

## Key Performance Metrics

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**15 kW**

Inverter Rated Power

**40.96 kWh**

Total Battery Energy

**3500 cycles**

Cycle Life (@80% DOD)

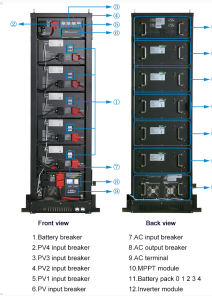
**800 Ah**

Rated Capacity

## Battery Specifications

Battery Chemistry	Lithium Iron Phosphate (LiFePO4)
Rated Voltage	51.2 vDC
Rated Charge Current	400 A
Max Discharge Current	880 A

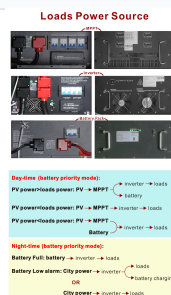
## Inverter & Charger



Detailed view of the internal MPPT module, battery packs, and circuit breakers.

Output Waveform	Pure Sine Wave
Peak Efficiency	>88% (Inverter Mode) / >95% (Line Mode)
MPPT PV Input Range	60-145vDC

## System Functions



Intelligent power management prioritizes solar usage during the day and battery discharge at night.

### Primary Applications

- Areas without electricity supply
- Residential backup power
- Commercial and industrial backup
- Communications industry backup
- Data center energy storage

Core Features	Plug & Play, Mobile App Monitoring, Active Balancing BMS, 19" Standard Rack Design, Automatic Calibration
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## Safety & Compliance

### Compliance Standards

ISO 9000 • ISO 14001 • CE • ROHS • UL • TUV • FCC

## Physical Dimensions



Compact vertical rack design measuring 1760mm in height.

## Unit Dimensions

Dimension	Value
Height	1760mm
Width	935mm
Depth	560mm

## Operating Environment

### Temperature Tolerances

Mode	Range
Charge Temperature	0~45
Discharge Temperature	-20~60