

# ES-5061-EU 50 kW 61 kWh BESS



Smart, space-saving storage with seamless solar  
integration and scalable deployment.

## System Features

### Optimized for Solar Integration

- Built-in MPPT and high-efficiency inverter streamline solar connectivity, cutting energy costs while supporting sustainability goals and grid independence.

### Compact Footprint, Powerful Delivery

- High-density storage and integrated design minimize space requirements, ideal for constrained sites, retrofits, or locations where every square foot matters.

### Always-On Safety

- Advanced safety systems pair fire prevention, live diagnostics, and multi-level protection to ensure operational assurance.

### Smart Energy Intelligence

- Integrated EMS enables real-time system oversight, remote control, and predictive diagnostics, empowering smarter, data-driven energy operations.

### Adaptive Site Flexibility

- Works seamlessly in centralized or distributed configurations, with or without inverter integration, fitting diverse site layouts and technical requirements.

### Modular Growth, Minimal Disruption

- Scale system capacity as your energy needs grow, without replacing core infrastructure or reworking electrical integration.



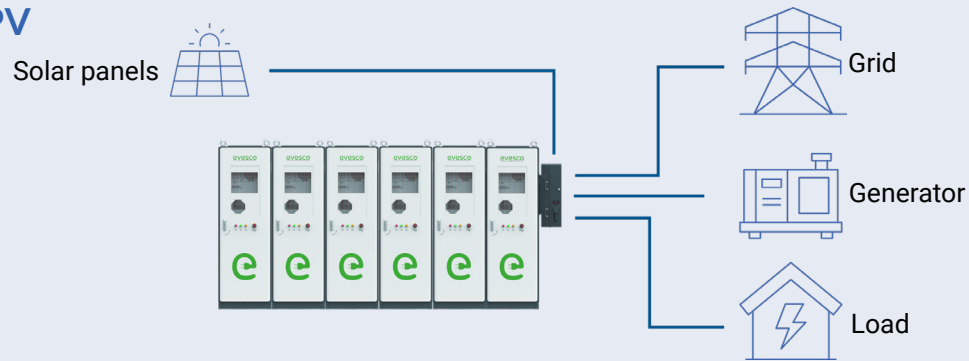
## System Specifications



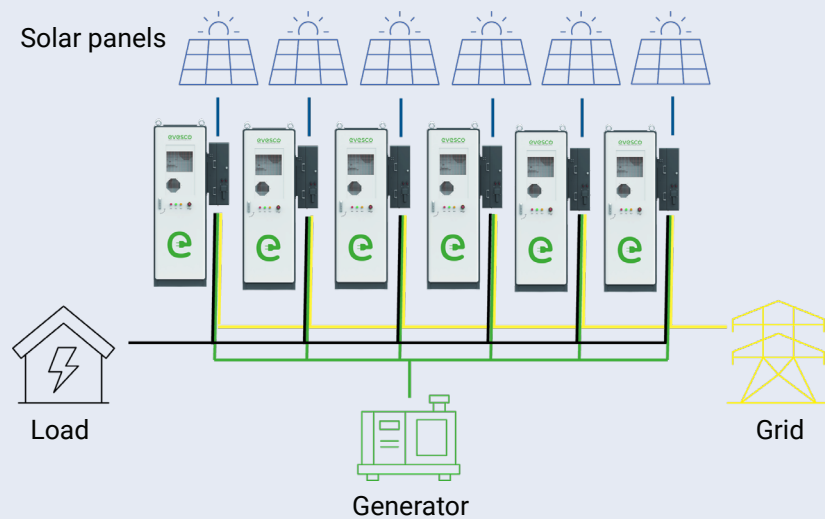
SPECIFICATIONS	
	BATTERY SPECIFICATIONS
MODEL NUMBER	ES-5061-EU (ES-61DC-EU for the battery without the inverter)
BATTERY CHEMISTRY	Lithium Iron Phosphate
MODULE ENERGY	5.12 kWh
MODULE NOMINAL VOLTAGE	51.2 V
MODULE CAPACITY	100 Ah
BATTERY MODULE CONFIGURATION	12S1P
SYSTEM NOMINAL VOLTAGE	614.4 Vdc
SYSTEM VOLTAGE RANGE	562.5 - 681.6 Vdc
SYSTEM ENERGY	61.44 kWh
CHARGE CURRENT	95 A
DISCHARGE CURRENT	95 A
DISCHARGE DEPTH	90% DoD
CYCLE LIFE	>8000 Cycles
	PV INPUT SPECIFICATIONS
MAX PV POWER	96 kW
MPPT VOLTAGE RANGE	150 - 850 V
STARTUP VOLTAGE	180 V
RATED VOLTAGE	600 V
MAX INPUT VOLTAGE	1000 V
MAX OPERATING INPUT CURRENT PER MPPT	40 A
MAX SHORT CIRCUIT CURRENT PER MPPT	60 A
NUMBER OF MPPT TRACKERS	4
NUMBER OF PV STRINGS PER MPPT	8

SPECIFICATIONS	
	AC OUTPUT SPECIFICATIONS
RATED VOLTAGE	3 / N / PE, 230 V / 400 Vac
GRID FREQUENCY	50 / 60 Hz
RATD OUTPUT POWER	50 kW
RATED OUTPUT CURRENT	76 A
MAX APPARENT OUTPUT POWER	1.6 times / 2s
MAX AC PASS-THROUGH CURRENT	152 A
THDI @ RATED POWER	<3%
POWER FACTOR OUTPUT RANGE	0.8 leading - 0.8 lagging
BACKUP TRANSFER TIME	<10 ms
THDv @ LINEAR LOAD	<2%
	GENERAL SPECIFICATIONS
COMMUNICATION INTERFACE	CAN, RS485, Wi-Fi, LTE
CERTIFICATION (BATTERY)	UL1973U, L9540A UL 1741-2021 (incl UL1741SB) IEEE 1547-2018 & 1547a-2020 & 1547.1-2020 (SRD V2.0), UL1699B
CERTIFICATION (INVERTER)	IEC/EN62619:2022, IEC/EN62477-1:2012+A11+A1+A12 IEC/EN61000-4-2:2019, IEC/EN61000-4-2:2019 EN301908-1 V15.2.1:2013, EN301908-13 V13.2.1:2022 EN301489-1:2019 V2.2.3:2019, EN301489-52 V1.2.1:2021
IP RATING	IP55
OPERATING TEMPERATURE	-22°F (-30°C) to 122°F (50°C)
OPERATING HUMIDITY	5 - 85% RH
DIMENSIONS W x D x H	750 x 950 x 2280 mm 29.5 x 37.4 x 89.7 in
WEIGHT	~ 1050 kg ~ 2315 lb

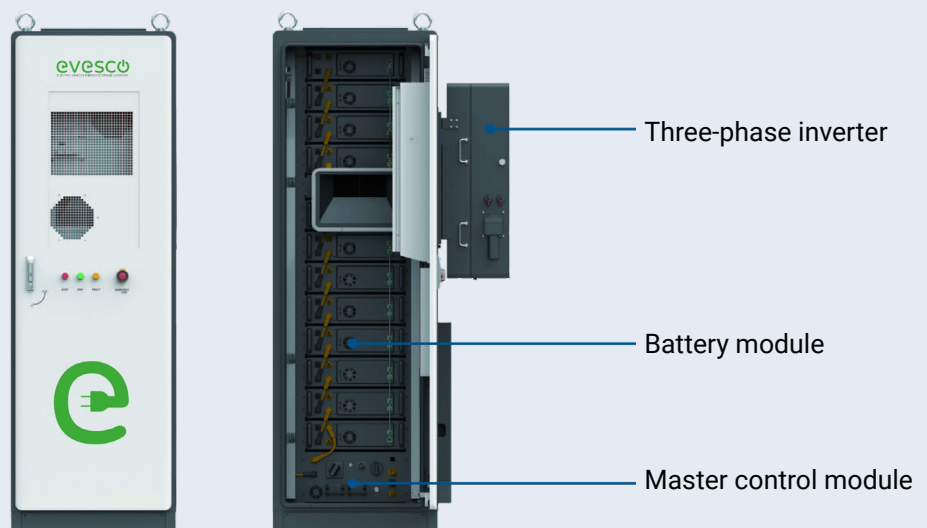
## Centralized PV



## Distributed PV



## System Layout





## Integrated Energy Management System (EMS)

Smarter Control. Greater Uptime. Total Visibility. EVESCO's advanced EMS is engineered for real-time energy intelligence, empowering operators with control, insight, and automation at every level of the system. Whether on-site or in the cloud, you get precision management, proactive alerts, and unmatched flexibility.

### Real-Time Monitoring & Alerts

- Continuously tracks battery health, cooling, PCS, fire suppression, and system performance. Enables instant alerts and data-driven decision-making.

### Enterprise-Grade Security

- Multi-layered cybersecurity architecture with encryption, user access control, and audit trails to protect critical infrastructure and data integrity.

### Scalable, Modular Architecture

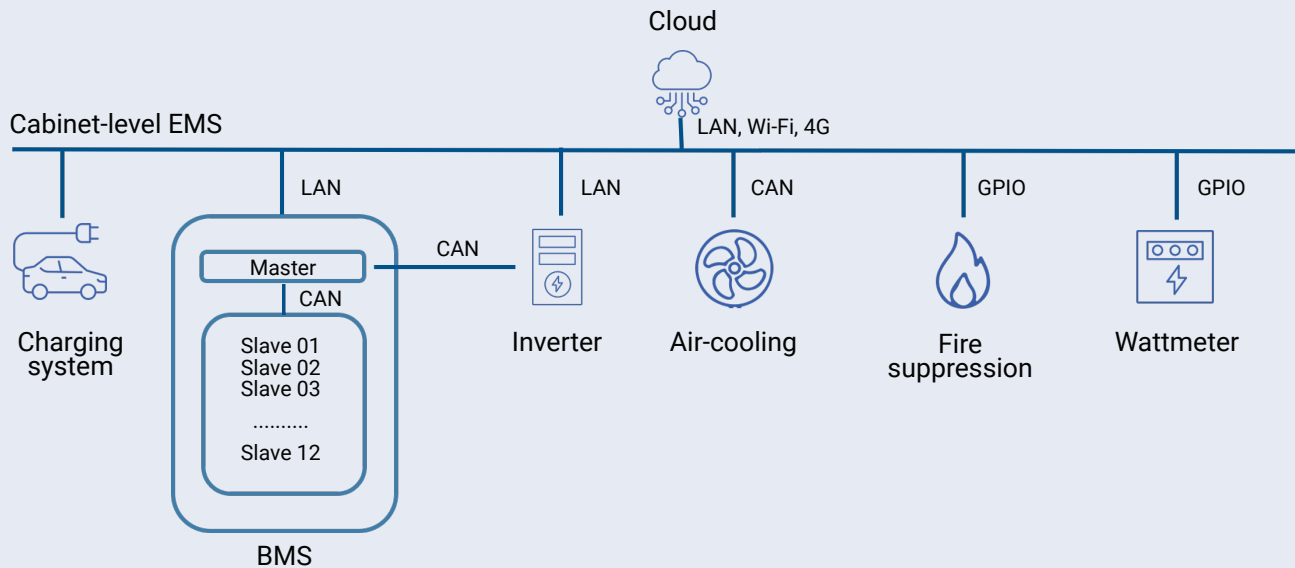
- Supports cabinet-level to station-level EMS deployment. Easily add new systems or expand capacity without reconfiguring your control strategy.

### Proactive Maintenance & Diagnostics

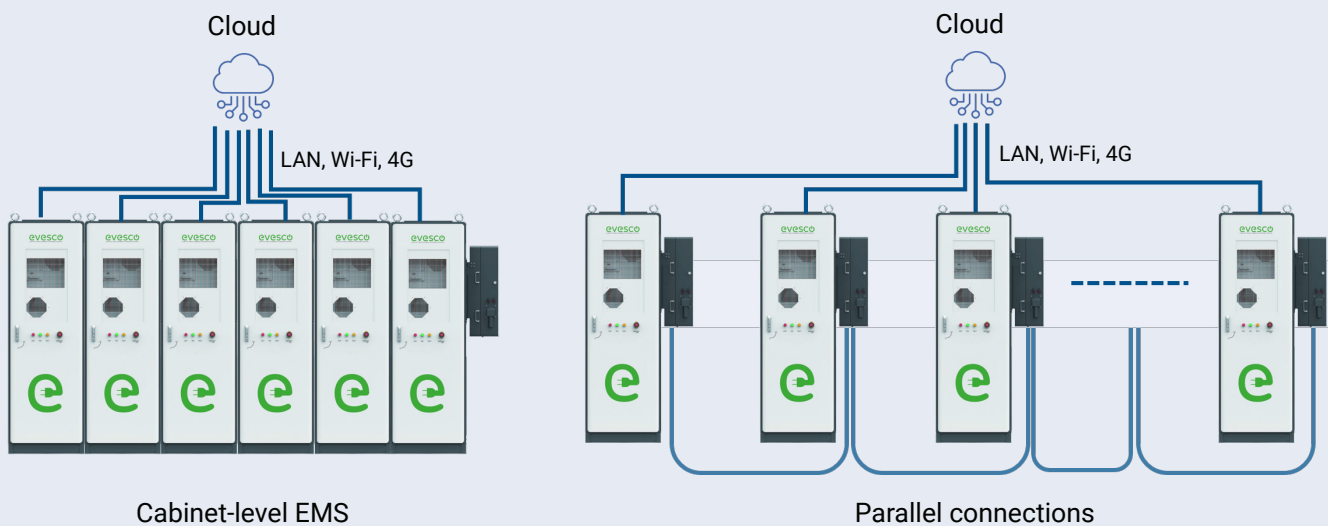
- Delivers predictive insights and fault detection to reduce downtime, streamline service cycles, and maximize asset life.

With EVESCO's EMS, you don't just store energy, you manage it with confidence, precision, and real-time visibility.

## EMS Structure



## Example



Ready to take control of your energy strategy?  
Contact us at [evesco@power-sonic.com](mailto:evesco@power-sonic.com) to explore  
how EVESCO can accelerate your storage goals.