WELTRUS

ENERGY CUBE
50kW-100kWh

HIGH PERFORMANCE
COMMERCIAL & INDUSTRIAL ESS



- PV / DG Application
- Intelligent Energy Control
- 98.8% Max. Efficiency
- IP54 Protection Degree

Integrated design

Adaptation for Multi-Scenario Deployment

Energy Cube 50kW-100kWh C&i ESS integrates photovoltaic inverters and a 100 kWh energy storage system. It includes battery cells, Battery Management System (BMS), photovoltaic inverters, fire protection system, distribution system, thermal management system, and energy management system. This achieves an integrated "PV + Energy Storage" solution. The cabinet system adopts a modular design, allowing flexible configurations for photovoltaic, batteries, and loads, meeting various user-side applications.



High Integration

The equipment is highly integrated,with a compact product size, occupying only 1.2 square meters per cabinet.

Reliable Performance

Low Loss Series Connection on the DC Side
Dynamic Temperature Regulation
Enhanced ESS Cycling Efficiency

Security and tability

Utilizing Top-Tier Battery Cell Suppliers
Battery Safety Warnings and Fault Switching
Automatic Fire System Response

Multi-Unit Parallel Expansion

Flexible Scalability, On-Demand Configuration
Supports Multiple Units
Parallel Cooperative Control

PV / DG Application

Directly connecting photovoltaic modules or diesel generators to establish an independent power grid.

APP Intelligent Control

Enhance energy efficiency by controlling the operational status and strategies of the devices through a mobile app.

Application Scenario

Savings on Electricity Costs through Peak-Off-Peak Price Differentials

During periods of low electricity prices, use the grid to charge the devices. During periods of high electricity prices, discharge the batteries to power the load.

Used as a Backup Power Source during Power Outages

It can serve as a backup power source during power outages, providing power to critical facilities to ensure uninterrupted business operations.

Providing Power Compensation

Providing Power Compensation Function to Ensure Stable Power Supply for Businesses and Ensure Safe Equipment Operation.

PV and Energy Storage Integration Building an Independent Grid

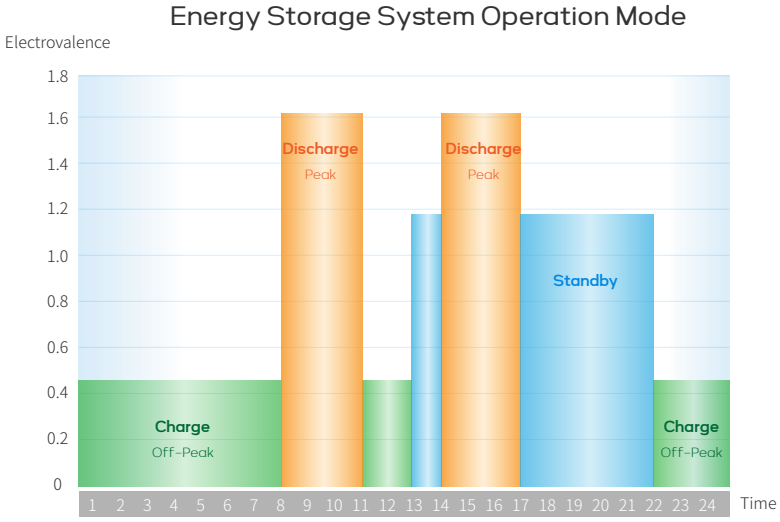
Storing excess electricity generated by the photovoltaic system using the Energy Cube and converting it for later use.











22:00-8:00

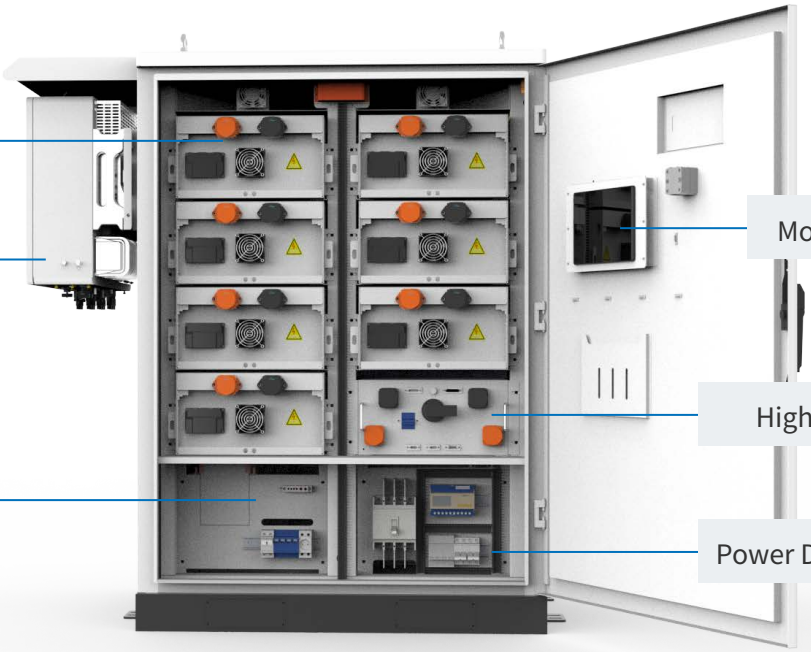
Charging during off-peak electricity price periods

8:00-11:00 14:00-17:00

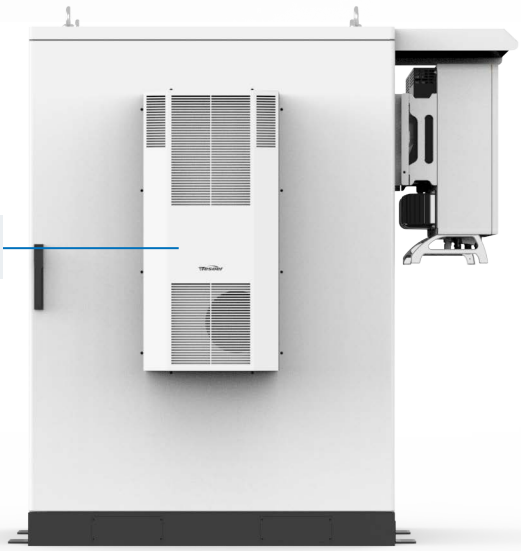
Discharging during peak electricity price periods

During device charging, the system automatically monitors the current electrical load and PV generation under the transformer, and adjusts the charging power of the system based on real-time load conditions. This control ensures that the total power consumption remains below the transformer capacity, preventing overload.

Product Exterior







Product Parameter

DC Parameter			
Battery Type	LFP	Operating Voltage Range	280V～408.8V
Combination Mode	1P112S	Charge/Discharge Current	100A/100A
Rated Capacity	280Ah	Cooling Mode	Air Cooling
Rated Energy	100kWh	Cycle Number	6000
Rated Voltage	358.4V	Fire Protection System	Aerosol Extinguishing
Rated Power	50kW	Detector Type	Temperature / Smoke Sensor / Water Leak
PV Parameter			
Maximum Input Power	75kW		
Maximum Dc Input Voltage	1000V		
Mppt Operating Voltage Range	200-850V		
Maximum Input Current	30A×4		
Rated Output Power	50kW		
Maximum Conversion Efficiency	98.8%		
Ac Parameter			
Rated Output Power	50kW		
Rated Voltage	3L/N/PE; 220/380V;230/400V;240/415V		
Grid Frequency	50/60Hz		
Maximum Output Current	83A		
Power Factor	0.8 Lead... 0.8 lag		
System Parameter			
Operating Environment	-20℃～50℃（Power derating 45℃+）		
Size (W*D*H mm)	1130*1000*1600		
Weight	About 1.4t		
Class Of Protection	IP54		
Allowable Relative Humidity	0-95%		
Allowable Altitude	≤2000m（Power derating 2000m + ）		
Certification Standard	IEC62619、EN62477-1、IEC 63056		