

Empowering
Carbon-Free with
Intelligent and
Secure
Energy Storage

Energy Onboard. Power Anywhere.

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Smart Storage, Safe Power,
Sustainable Future.

Turtle M Series **Mobile ESS**

Multi-Scenario Mobile Energy Solution

- **Flexible Power Supply**
- **Anytime, Anywhere**



Product Advantages

Multi-Application Capability

· Power Supply · EV Charging · Emergency Backup
· Industrial Use → **One System, Multiple Applications**

Reliable Power Delivery

Industrial-Grade Power Output
→ **Reliable for Critical Equipment**

Enhanced Safety

Multi-Level Safety Protection
→ **Reduced Operational Risks**

Enhanced Durability

Automotive-Grade Structural Design
→ **Reliable Performance Under Long-Term Mobility**

Enhanced Environmental Resilience

Stable Operation from -30°C to 55°C → **Reliable Even in Harsh Outdoor Environments**

Higher Efficiency

Plug-and-Play, Rapid Deployment; supports energy interconnection between multiple storage units
→ **Enables energy sharing and coordinated operation, ready for immediate use upon arrival**



Not just a mobile ESS, but an integrated mobile energy solution for complex scenarios

Core Technology Architecture

◆ Module 1: Mobility Reliability Design

Multi-Point Fixation · Front and Rear Locking

Optimized fixation structure for mobile scenarios, with additional rear anchoring points to improve overall vehicle stability during operation.

Simulation-Based Design · Strong and Durable Connections

Based on full-scenario simulations including lifting, acceleration, emergency braking, sharp turning, torsion, and random vibration, enhancing the reliability of the vehicle and critical components.

◆ Module 2: Harsh Environment Adaptability

Extreme Cold & Heat · Full-Range Adaptability

Six-sided insulation of the battery compartment with low-temperature heating design enables stable operation from -30°C to 55°C.

Road-Compliant Vehicle Height Design

Optimized vehicle height design to meet clearance requirements for bridges, tunnels, and other constrained road conditions.

◆ Module 3: Stable Power Supply Capability

Stable High-Current Output · Superior Quality and Performance

The system features isolated design architecture, supporting surge loads and three-phase unbalanced loads with stable and reliable output.

◆ Module 4: System Operation & Energy Dispatch Capability

Multi-Level Protection · Enhanced System Safety

A multi-layer safety system covering intrinsic safety, active early warning, and passive protection.

Cluster-Level Independent Control · Automatic Fault Isolation

Battery clusters operate independently, with faulty units automatically isolated for handling.

AC/DC Dual Charging · Flexible Charging Compatibility

Supports both AC and DC charging/discharging modes, adapting to different energy replenishment and supply requirements.

Coordinated Power Supply Capability

When the lead vehicle continuously supplies power to the load, the following vehicle can simultaneously supply power to the same load while providing real-time energy replenishment to the lead vehicle.

Flexible Capacity Selection · Scalable on Demand

Offers multiple capacity configurations and output options to suit different application scenarios.

Non-Stop Mobile Energy Storage System

Continuous Power, Engineered Safety

In mobile power supply scenarios, the real challenge is not simply whether power is available, but whether the system can maintain continuous and stable operation under complex conditions and unexpected failures.

Wincle builds on automotive-grade design and an integrated system architecture to establish a **three-in-one safety framework covering structural safety, battery safety, and system safety**. This enables an upgrade from “fault-induced shutdown” to “fault isolation with continuous operation.”

Core Capability | Fault Isolation & Continuous Operation

- Independent battery cluster control with automatic fault isolation
- Continuous operation for critical loads without system interruption

Protection Layer 1 | Structural Safety

◆ **Engineered for Mobility**

- Multi-point fixation with front and rear locking structure
- Full-condition simulation validation including vibration, shock, and cornering

Protection Layer 2 | Battery Safety

◆ **All-Climate Reliability**

- High-thermal-stability LFP cells
- Stable operation from -30°C to 55°C

Protection Layer 3 | Active Protection

◆ **Intelligent Detection & Fire Suppression**

- AI-based monitoring and full-node thermal management
- Dual protection with aerosol and water-based fire suppression



Why Choose Wincle’s Mobile ESS?

Key Dimensions	Conventional Mobile ESS	Wincle’s Mobile ESS
Design Logic	Equipment retrofitted onto vehicle	System-level design
Mobility Reliability	Basic transport adaptation	Automotive-grade structural design
Application Scenarios	Single-purpose use	Multi-scenario applications
Power Quality	Basic power supply	Industrial-grade stable power output
Safety System	Single-layer protection	Multi-layer safety architecture
Environmental Adaptability	Standard environmental conditions	Wide-temperature operation capability

Mobile ESS Deployment & Commercial Support

Core Positioning

Supporting faster deployment of mobile energy storage systems through integrated commercial, financing, and operational services.

Core Services

◆ **Project Partnership**
Supporting project development through integrated technical and commercial collaboration.

◆ **Financing Support**
Flexible financing and investment support for mobile ESS deployment.

◆ **Joint Project Operation**
Shared operational models designed to improve project efficiency and long-term returns.

Core Advantages

End-to-End Support for the Mobile ESS Market
Flexible • Scalable • Deployment-Ready

Collaboration Process

1 Requirement Assessment

2 Solution Development

3 Commercial Agreement

4 Deployment & Support

Typical Application Scenarios

Temporary Power Supply

Suitable for outdoor events, construction sites, and temporary facilities in off-grid areas

- ◆ Rapid deployment to meet temporary power supply needs



Emergency Power Supply

Suitable for sudden power outages, disaster relief, and emergency support

- ◆ Ensures continuous operation of critical equipment



Mobile Charging

Suitable for temporary EV energy replenishment and areas with insufficient charging infrastructure

- ◆ Enables flexible deployment of mobile charging stations for rapid energy supply



Industrial & Commercial Power Supply

Suitable for factories, industrial equipment, and high-load power demand scenarios

- ◆ High-power output to meet complex electricity requirements



Grid Support Services

Suitable for peak shaving, load shifting, and temporary grid support

- ◆ High-capacity energy storage to support grid operation optimization



Turtle M Series Mobile ESS Selection Guide

Light-Duty Applications

Plug-and-play design, supporting rapid deployment and flexible relocation.

- ◆ **Product Models:** M289 / M418
- ◆ **Application Scenarios:** Outdoor event power supply / Temporary construction power / Emergency backup power
- ◆ **Features:** Plug-and-play, no additional equipment required / Standard AC output with strong compatibility / Rapid deployment and flexible relocation

Medium and Above Applications

High-power output, suitable for high-load and professional power supply applications.

- ◆ **Product Models:** M964 / M1446 / M1928 / M3343
- ◆ **Application Scenarios:** Mobile charging stations / Industrial & commercial power supply / Emergency backup power / Grid peak shaving / Load shifting
- ◆ **Features:** High-power output for heavy-load requirements / Supports multiple interface configurations for professional power applications / Flexible deployment for complex scenarios



◆ Product Selection Overview

Application Tiers	Typical Application Scenarios	Recommended Models	Core Features
Light	Outdoor events / Temporary / Emergency	M289 / M418	Plug & play / Fast / Flexible
Medium	Mobile charging / Mid C&I	M964	High power / Multi-interface
Heavy	Industrial / High-load use	M1446 / M1928	Large capacity / Stable
Ultra-Large	Grid support / Large-scale power	M3343	Ultra-large / Grid-level / High power

Turtle M289 Mobile ESS

- ◆ **Product Positioning:** Lightweight mobile power supply solution
- ◆ **Application Scenarios:** Temporary power / Emergency power supply

Core Advantages

- Plug & play, rapid deployment
- Flexible relocation, adapts to various environments
- Stable output, ensures equipment safety

Key Parameters

- Energy: 289kWh
- Power: 140kW
- Protection: IP54
- Cooling Method: Liquid Cooling

◆ Product Parameters

Model	Turtle M289
Rated Energy	289kWh
DC Voltage Range	720V~1000V
DC Charging Power	140kW/Optional
AC Charging Power	140kW/400V
AC Output	400V AC
Rated Frequency	50Hz/60Hz
Rated Output Power	140kW/AC
Max. Output Power	168kW @25°C, SOC>20%, 60S
Operating Temperature	-30~55°C (>45°C Derating)
Operating Altitude	≤2000m (>2000m Derating)
Cooling Method	Liquid Cooling
Communication Interface	RS485/CAN/Ethernet
Cloud Platform	Available
OTA	Available
HMI	Touch Screen
ESS Dimension (L*W*H)	4053*1906*1800mm
ESS Weight	6.8t
IP Level	IP54
Fire Suppression System	Pack-level aerosol + cluster-level aerosol + cluster-level water fire suppression + active early warning

Turtle M418 Mobile ESS

- ◆ **Product Positioning:** Enhanced mobile power supply system
- ◆ **Application Scenarios:** Temporary power / Construction site power supply

Core Advantages

- Larger capacity for longer power supply
- Plug & play, easy deployment
- Stable output for various equipment

Key Parameters

- Energy: 418kWh
- Power: 200kW
- Protection: IP54
- Cooling Method: Liquid Cooling

◆ Product Parameters

Model	Turtle M418
Rated Energy	418kWh
DC Voltage Range	1040V~1500V
DC Charging Power	120kW/Optional
AC Charging Power	200kW/400V
AC Output	400V AC
Rated Frequency	50Hz/60Hz
Rated Output Power	200kW/AC
Max. Output Power	240kW @25°C, SOC>20%, 60S
Operating Temperature	-30~55°C (>45°C Derating)
Operating Altitude	≤2000m (>2000m Derating)
Cooling Method	Liquid Cooling
Communication Interface	RS485/CAN/Ethernet
Cloud Platform	Available
OTA	Available
HMI	Touch Screen
ESS Dimension (L*W*H)	4053*1906*1800mm
ESS Weight	7.5t
IP Level	IP54
Fire Suppression System	Pack-level aerosol + cluster-level aerosol + cluster-level water fire suppression + active early warning

Turtle M964 Mobile ESS

- ◆ **Product Positioning:** Mobile high-power DC energy supply platform
- ◆ **Application Scenarios:** Mobile charging / Medium-scale high-power supply

Core Advantages

- Larger capacity for extended operation
- Plug & play, easy deployment
- Stable output, broad equipment compatibility

Key Parameters

- Energy: 964kWh
- Power: 240kW
- Protection: IP54
- Cooling Method: Liquid Cooling

◆ Product Parameters

Model	Turtle M964
Rated Energy	964kWh
DC Voltage Range	600V~876V
DC Discharging Power	240kW
Number of Discharge Guns	120kW*2
Max. Discharge Current per Gun	250A
Discharge Standard	CHAdEMO、GB/t、CCS1、CCS2 (Optional)
DC Charging Power	160kW*2
Charging Voltage	1000V DC
Operating Temperature	-30~55°C (>45°C Derating)
Operating Altitude	≤2000m (>2000m Derating)
Cooling Method	Liquid Cooling
Communication Interface	RS485/CAN/Ethernet
Cloud Platform	Available
OTA	Available
HMI	Touch Screen
ESS Dimension (L*W*H)	4166*2438*2400mm
ESS Weight	15t
IP Level	IP54
Fire Suppression System	Pack-level aerosol + cluster-level aerosol + cluster-level water fire suppression + active early warning

Turtle M1446 / M1928 Mobile ESS

- ◆ **Product Positioning:** High-capacity mobile energy supply system
- ◆ **Application Scenarios:** Industrial power supply / High-load applications

Core Advantages

- Large capacity for long-duration power supply
- High-power output for industrial demands
- Stable operation under high-load conditions

Key Parameters

- Energy: 1446kWh / 1928kWh
- Protection: IP54
- Cooling Method: Liquid Cooling

◆ Product Parameters

Model	Turtle M1446	Turtle M1928
Rated Energy	1446kWh	1928kWh
DC Voltage Range	600V~876V	
DC Discharging Power	480kW	
Number of Discharge Guns	120kW*4	
Max. Discharge Current per Gun	250A	
Discharge Standard	CHAdEMO、GB/t、CCS1、CCS2 (Optional)	
DC Charging Power	160kW*2	
Charging Voltage	1000V DC	
Operating Temperature	-30~55°C (>45°C Derating)	
Operating Altitude	≤2000m (>2000m Derating)	
Cooling Method	Liquid Cooling	
Communication Interface	RS485/CAN/Ethernet	
Cloud Platform	Available	
OTA	Available	
HMI	Touch Screen	
ESS Dimension (L*W*H)	6058*2438*2400mm	
ESS Weight	20t	22.5t
IP Level	IP54	
Fire Suppression System	Pack-level aerosol + cluster-level aerosol + cluster-level water fire suppression + active early warning	

Turtle M3343 Mobile ESS

- ◆ **Product Positioning:** Large-capacity mobile energy storage system, designed for use with an independent PCS system
- ◆ **Application Scenarios:** Grid support / Large-scale power supply

Core Advantages

- Ultra-large capacity for high energy demands
- Supports high-power output
- Suitable for grid-level applications

Key Parameters

- Energy: 3343kWh
- Protection: IP54
- Cooling Method: Liquid Cooling

◆ Product Parameters

Model	Turtle M3343
Rated Energy	3343kWh
DC Voltage Range	1040V~1500V
DC Charge/Discharge Power	1672kW
Number of Discharge Guns	8
Max. Discharge Current per Gun	250A
Max. Current per Gun	300A
Charging Voltage	1500V DC
Operating Temperature	-30~55°C (>45°C Derating)
Operating Altitude	≤2000m (>2000m Derating)
Cooling Method	Liquid Cooling
Communication Interface	RS485/CAN/Ethernet
Cloud Platform	Available
OTA	Available
HMI	Touch Screen
ESS Dimension (L*W*H)	6058*2438*2896mm
ESS Weight	≈ 31t
IP Level	IP54
Fire Suppression System	Pack-level aerosol + cluster-level aerosol + cluster-level water fire suppression + active early warning

About Wenergy

Integrated Digital Energy Management:
BESS + Electricity Trading + Virtual Power Plant

Wincle Energy Pte. Ltd. specializes in digital energy management and integrated energy solutions for global customers.

Covering the generation side, grid side, and end-user side, Wincle provides full lifecycle energy storage services through solutions including BESS, electricity trading, virtual power plants (VPP), zero-carbon parks, and source-grid-load-storage integration, supporting the digital and low-carbon transformation of modern energy systems.

Powered by advanced Energy IoT and intelligent management platforms, Wincle delivers flexible power dispatching, energy optimization, and coordinated system operation.

The company operates automated production lines for containerized BESS, prefabricated ESS, distributed energy storage systems, and mobile ESS solutions, serving a wide range of industrial, commercial, and utility-scale applications.

Driven by continuous innovation and engineering expertise, Wincle is committed to building smarter, more efficient, and more sustainable energy systems worldwide.

15+Years

Cell R&D and Manufacturing Experience

660,000m²+

R&D and Manufacturing Base

50,000 tons

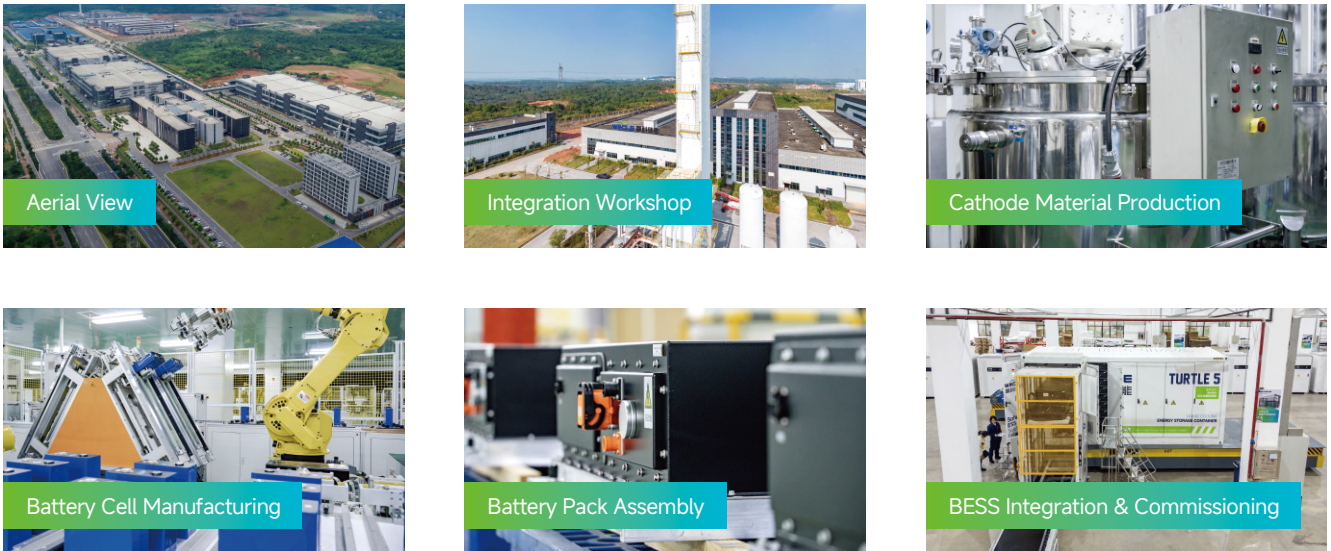
Annual Production Capacity of NCM and LFP Cathode Materials

15 GWh

Annual Lithium Battery Production Capacity

300+

Cell R&D Patents



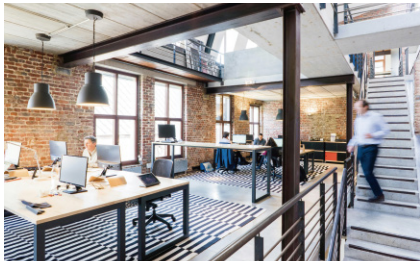
Global Presence

Offices

Singapore, China, USA, Germany, Italy, Chile

Overseas Warehouse

Netherlands



5 Global Branches

60+ Countries / Regions Exported To

200+ Projects on Track

20+ Industries Served with Tailored Solutions

(Cement Industry, Industrial Manufacturing, Textile Industry, Electronic Industry, Environmental Protection Industry, Paper and Printing Industry, Data Centers, Commercial Complexes...)

Application Cases

Jinhua, China | Hengdian World Studios Mobile ESS Project
Scale: 16.7MW / 34.7MWh



Anhui Boshi High-Tech New Material Project
3.44MW / 6.88MWh



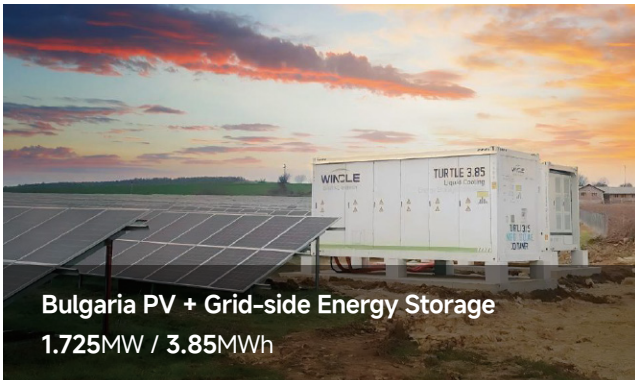
Chongqing Xiyuan Camshaft Project
4.245MW / 8.858MWh



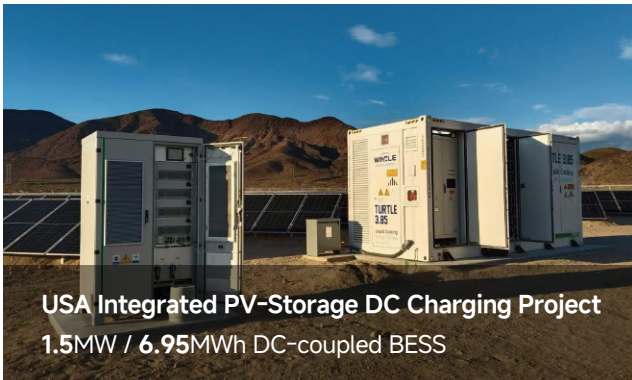
Hunan Haili Lithium Battery Project
1.25MW / 3.44MWh



CEEC-CGGC Laohekou Cement Project
10.2MW / 20.64MWh



Bulgaria PV + Grid-side Energy Storage
1.725MW / 3.85MWh



USA Integrated PV-Storage DC Charging Project
1.5MW / 6.95MWh DC-coupled BESS



Zambia PV-Storage-Diesel Off-Grid Operation
3.45MW / 7.7MWh



Zimbabwe PV-Storage-Diesel Off-Grid Operation
12MW / 24MWh