INTELLIGENT SWAPPING CHARGING CABINET

Focus on One Stop Swapping Solutions



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Shenzhen ESINO Technology Co., Ltd.

ESINO was founded in 2011, which is a national high-tech enterprise with dozens of battery replacement software and hardware patents.





Wechat Applet: ES Cloud

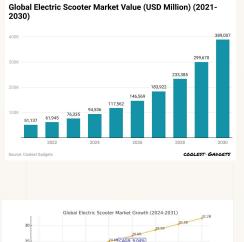
Service for millions of Swapping User at the same time



- Focus on providing efficient battery charging and swapping solutions for riders and civilian electric motorbikes.solving users' mileage anxiety and charging safety issues.
- Own Independently SaaS Platform: A smart cloud platform integrating lithium battery Tracking/Battery and Store Manegement/Swapping
- With the International ISO 9001 Production Management System Certification. Serving thousands of enterprises and institutions such as MeiTuan. JD. com. and SF Express. and products cover diversified scenarios.
 - Strong Technical R&D Capabilities and Perfect After-Sales
 Service.Suitable for large-scale operation and high-end
 customization needsneeds. Good market reputation.Service covers
 major cities across the country.Stable product quality and strong
 adaptability.Rich industry supporting resources and more than ten
 years of export experience. Suitable for Global multiple scenarios of
 battery replacement.

Swapping Market Analysis









Current EV Scooter Stock

By the end of 2024 in China the EV Scooter will exceed 420 millions

Continuous Increase

By 2024 the sales amount for EV Scooter will exceed 54 million units

Catch Fire While Charging

In recent years tens of thousands of fires caused by EV Scooter when charging at home every year

Policy Trends Dividends

The government is determined to regulate the safety of EV Scooter charging and promote the swapping facilities



The Pain Points of Traditional Battery Rental and Swapping Services

Requires staff to be present at the store/ Poses significant safety risks/Prone to fire safety inspections/ Difficulty in standardizing batteries/Heavy asset investment in batteries/High barriers to large-scale operations



Built-in heating system enables

charging and swapping at -30°C



Door Charging and Swapping inside of store

Requires staff on-site, high labor and rent costs; no power display during charging, needing manual monitoring; charging racks lack smart fire safety, low security; frequent fire inspections, causing stress.



History battery use by hardware version BMS

For early battery rental operators with hundreds of hardware-based batteries deployed, upgrading to software-based BMS and disassembly costs are high. Discarding existing hardware-based batteries for new ones is wasteful.



Battery can't charging at -20 to -30°C

In the winter of northern area, nighttime temperatures drop to -20~-30°C. Typically, electronic components cannot function properly at -20°C, their temperature limit.



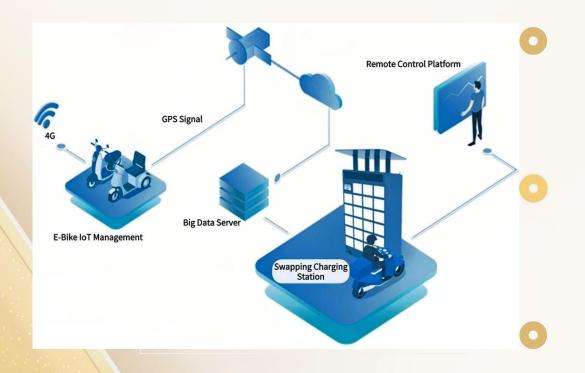
Battery Capital Pressure

Purchasing batteries is a heavy asset, and the fixed costs of renting storefronts and labor make it difficult to replicate and scale up rapidly.



ESINO Battery Swapping System Architecture

GPS Module + BMS Protection Board + Smart Swap Cabinet + Swap Mini Program + Cloud Management Platform





ES-C04 Handle GPS Positioning and Communication Module

BeiDou GPS precise positioning, real-time monitoring, remote power-off, mileage playback, compatible with various BMS.



ES-MT Smart BMS Integrated Protection Board with GPS

RS485 communication, real-time data collection, intelligent protection, short-circuit protection, smart balancing, cycle count statistics.



ES-DG Multi-Slot Smart Battery Swap Cabinet

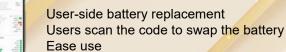
Hardware-based swapping, reverse power supply, (for northern winters) heated compartments, high-temperature heat dissipation, intelligent charging and swapping.



One Stop Battery Swapping Solution Provider

Through the offline cabinet and the online Applet, online quick scanning/card swiping can be realized. The 8 second battery swap solves the problems of high-density battery swapping demand for intra-city delivery, high-power charging safety, risks of centralized charging of lithium batteries, and difficulty in supervision.







Battery swap cabinet management Manage battery Easy management for multi store



Merchant Management
Merchants can manage
Battery swap cabinet and battery information



Battery Management Remotely operated battery Control circuit switch



Product Center

Swapping Battery Cabinet/ Charging Cabinet

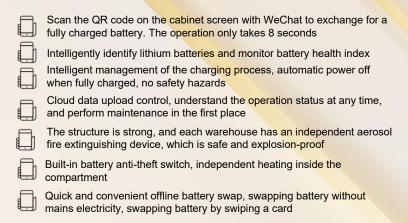
12 slots Swapping Battery Cabinet(ES-DG12)



The battery charging and swapping cabinet is an intelligent device for charging and swapping lithium batteries. It can charge and swap multiple types of lithium batteries at the same time.

It is suitable for logistics, express delivery, take-out, postal service, motorcycle sales points, community properties, rental houses, factories, schools, park attractions, corporate units, and other operation projects.

Product Features





Advantages Design for Our Cabinet Details



Integrated board with temperature-sensing and lighting: opens compartment, activates lighting for nighttime swaps. Temperature-sensing monitors real-time internal changes, transmits data to backend for timely heating or cooling, ensuring stable operation in all compartments.



Smoke detectors monitor smoke concentration to prevent fires. We use ionized smoke sensors, a technologically advanced and reliable solution, outperforming gas-sensitive resistor-based fire alarms.



2+6, 2+4 smart plugs feature a dual-hole handle design, offering riders exceptional convenience for battery swaps.Can also optional for Anderson adapter or more.Need knows the line order



Optional in-compartment heating module with built-in temperature sensors. Backend system monitors real-time temperature, ideal for cold regions. Self-adjusting heating maintains set range, extending battery life. (Optional)



Smart meters, as intelligent terminals of the smart grid, go beyond traditional energy measurement. They support bidirectional multi-tariff metering, user-end control, diverse data transmission modes, bidirectional communication, and anti-theft features. Operators can remotely monitor real-time power consumption of swap cabinets, facilitating scalable operational growth.



Optional stainless steel ball-bearing slides in compartments. With the market shift to larger batteries, riders often face challenges inserting them. These slides allow effortless battery insertion, saving time and effort for riders.



High-performance stable charger, standard 800W fast charging for better battery lifespan, with optional 1200W and 1500W configurations.



Compartments equipped with anti-theft battery module switches. Real-time data transmission to the backend system significantly reduces battery theft risks, ensuring operators no longer worry about losses. Physical defense, more reliable.

ESINO Be a Global Brand in Swapping

Product Center

Swapping Charging Cabinets / DC Battery Cabinets (ES-DG5)

Applicable Scenarios

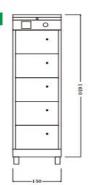
Battery charging and swapping cabinet is an intelligent equipment for charging and swapping lithium batteries, which can be used for charging and swapping many types and multiple lithium batteries at the same time. It is suitable for logistics, express delivery, takeaway, postal service, motorcycle sales points, neighborhood properties, rental housing, factories, schools, parks and attractions, business units, operation projects, etc.

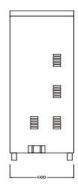
Product Features

- ◆ Scanning the QR code (or the RFID Card for international version cabinet)on the cabinet screen with WeChat or APP, you can change the full-charged battery, the operation only takes 8 seconds, fast and convenient.
- ◆ Intelligent identification of lithium batteries and monitoring of battery health index.
- Intelligent management of the charging process, full that is, automatic power off, no security risks.
- ◆ Cloud data upload control, always know the operation status, the first time maintenance.
- ◆ Sturdy structure, each bin has an independent aerosol fire extinguishing device, safe and explosion-proof.

dimensioned drawing

Note: In millimeters







Equipment Parameters

Product Model	Product Model ES-DG5 Detailed Rated Power 4KW-800W/Slot(1200W/1500W/1800W is option)							
Detailed Specifications	Rated Power	4KW-800W/Slot(1200W/1500W /1800W is optional)						
	User							
	Size	25*2*40(cm)/32*25*43(cm)						
	Equipment Size	46*63.5*166(cm)						
Charging	Input Voltage	180~264V/AC						
	Input Frequency	45~66Hz						
Equipment	Charging Port	2+4/2+6Plug Line						
	Output Voltage	43~87VDC						
	Rated Current	10A						
	Cabinet Weight	60Kg						
	Fire Fighting Methods	Aerosol Fire Fighting						
	Current Limit Protection Values	≥110%						
	Voltage Stabilization Accuracy	≤±0.5%						
	Stabilization Accuracy	≤±0.5%						
	Ripple Factor	≤±0.5%						
	Efficiency	≥98%						
	Power Factor	≥0.99(50%loads)						
Electrical	Harmonic Content THD	≤5%(50%loads)						
Indicators	Charging Mode	Scan The Code						
	Payment Methods	Scanning Code Payment/RFID Cards						
	Networking Methods	4G						
	Safety Function	Over-voltage protection, under-voltage protection, overload protection, short circuit protection, grounding protection, over-temperature protection, low temperature protection, lightning protection. Optional features: flood protection. Hardware board exchange reverse power supply, single compartment fan heatin						
	Operating Temperature	-35°C~+55°C						
	Operating Humidity	5%~95% Frost-Free						
Environmental Indicators	Working Altitude	<2000m						
	Protection Level	lp54						
	Cooling Method	Air Cooling						
	Noise Control	≤60dB						
	MTBF	100,000 Hours						

ESINO | Be a Global Brand in Swapping

Product Center

Swapping Charging Cabinets / DC Battery Cabinets (ES-DG8)

Applicable Scenarios

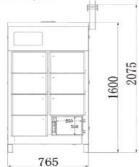
Battery charging and swapping cabinet is an intelligent equipment for charging and swapping lithium batteries, which can be used for charging and swapping many types and multiple lithium batteries at the same time. It is suitable for logistics, express delivery, takeaway, postal service, motorcycle sales points, neighborhood properties, rental housing, factories, schools, parks and attractions, business units, operation projects, etc.



- ◆ Scanning the QR code (or the RFID Card for international version cabinet) on the cabinet screen with WeChat or APP, you can change the full-charged battery, the operation only takes 8 seconds, fast and convenient.
- Intelligent identification of lithium batteries and monitoring of battery health index.
- ◆ Intelligent management of the charging process, full that is, automatic power off, no security risks.
- ♦ Cloud data upload control, always know the operation status , the first time maintenance.
- ◆ Sturdy structure, each bin has an independent aerosol fire extinguishing device, safe and explosion-proof.

Dimensioned Drawing

Note: In millimeters







Equipment parameters

Product Model	ES-DG8							
Detailed Specifications	Rated Power	6.4KW-800W/Slot(1200W/1500W /1800W is optional)						
,	User	10.1Inch Screen (optional)						
	Size	25*25*40(cm)/32*25*43(cm)						
	Equipment Size	84*68*170(cm)						
Charging	Input Voltage	180~264V/AC						
	Input Frequency	45~66Hz						
Equipment	Charging Port	2+4/2+6Plug Line						
	Output Voltage	43~87VDC						
	Rated Current	10A						
	Cabinet Weight	100Kg						
	Fire Fighting Methods	Aerosol Fire Fighting						
-	Current Limit Protection Values	≥110%						
	Voltage Stabilization Accuracy	≤±0.5%						
	Stabilization Accuracy	≤±0.5%						
	Ripple Factor	≤±0.5%						
	Efficiency	≥98%						
	Power Factor	≥0.99(50%loads)						
Electrical	Harmonic Content THD	≤5%(50%loads)						
Indicators	Charging Mode	Scan The Code						
	Payment Methods	Scanning Code Payment/RFID Cards						
	Networking Methods	4G						
	Safety Function	Over-voltage protection, under-voltage protection, overload protection, short circuit protection, grounding protection, over-temperature protection, low temperature protection, lightning protection. Optional features: flood protection. Hardware board exchange, reverse power supply, single compartment fan heating.						
	Operating Temperature	-35°C~+55°C						
	Operating Humidity	5%~95% Frost-Free						
Been voies was	Working Altitude	<2000m						
Environmental Indicators	Protection Level	lp54						
	Cooling Method	Air Cooling						
	Noise Control	≤60dB						
	MTBF	100,000hours						

ESINO | Be a Global Brand in Swapping

Product Center

Swapping Charging Cabinets/ DC Battery Cabinets (ES-DG10)

Applicable Scenarios

Battery charging and swapping cabinet is an intelligent equipment for charging and swapping lithium batteries, which can be used for charging and swapping many types and multiple lithium batteries at the same time. It is suitable for logistics, express delivery, takeaway, postal service, motorcycle sales points, neighborhood properties, rental housing, factories, schools, parks and attractions, business units, operation projects, etc.

Product Features

- ◆ Scanning the QR code (or the RFID Card for international version cabinet)on the cabinet screen with WeChat or APP, you can change the full-charged battery, the operation only takes 8 seconds, fast and convenient.
- ◆ Intelligent identification of lithium batteries and monitoring of battery health index.
- ◆ Intelligent management of the charging process, full that is, automatic power off, no security risks.
- ♦ Cloud data upload control, always know the operation status, the first time maintenance.
- ♦ Sturdy structure, each bin has an independent aerosol fire extinguishing device, safe and explosion-proof.

Dimensioned Drawing

Note: In millimeters





01 02 04 05 06 06 07 08 09 10

Equipment Parameters

Product Model	ES-DG10							
Detailed Specifications	Rated Power	8KW-800W/Slot(1200W/1500W /1800W is optional						
	User	10.1Inch Screen (optional)						
	Size	25*25*40(cm)/32*25*43(cm)						
	Equipment Size	84.5*68*178(cm)						
Charging	Input Voltage	180~264V/AC						
	Input Frequency	45~66Hz						
Equipment	Charging Port	2+4/2+6Plug Line						
	Output Voltage	43~87VDC						
	Rated Current	10A						
	Cabinet Weight	170Kg						
	Fire Fighting Methods	Aerosol Fire Fighting						
	Current Limit Protection Values	≥110%						
	Voltage Stabilization Accuracy	≤±0.5%						
	Stabilization Accuracy	≤±0.5%						
	Ripple Factor	≤±0.5%						
	Efficiency	≥98%						
	Power Factor	≥0.99(50%loads)						
Electrical	Harmonic Content THD	≤5%(50%loads)						
Indicators	Charging Mode	Scan The Code						
	Payment Methods	Scanning Code Payment/RFID Cards						
	Networking Methods	4G						
	Safety Function	Over-voltage protection, under-voltage protection, overload protection, short circuit protection, grounding protection, over-temperature protection, low temperature protection, lightning protection. Optional features: flood protection. Hardware board exchange, reverse power supply, single compartment fan heating						
	Operating Temperature	-35°C~+55°C						
	Operating Humidity	5%~95% Frost-Free						
	Working Altitude	<2000m						
Environmental Indicators	Protection Level	lp54						
	Cooling Method	Air Cooling						
	Noise Control	≤60dB						
	MTBF	100,000Hours						

ESINO | Be a Global Brand in Swapping

Product Center

Swapping Charging Cabinets/ DC Battery Cabinets (ES-DG12)

Applicable Scenarios

Battery charging and swapping cabinet is an intelligent equipment for charging and swapping lithium batteries, which can be used for charging and swapping many types and multiple lithium batteries at the same time. It is suitable for logistics, express delivery, takeaway, postal service, motorcycle sales points, neighborhood properties, rental housing, factories, schools, parks and attractions, business units, operation projects, etc.



Product Features

- Scanning the QR code (or the RFID Card for international version cabinet) on the cabinet screen with WeChat or APP, you can change the full-charged battery, the operation only takes 8 seconds, fast and convenient.
- ♦ Intelligent identification of lithium batteries and monitoring of battery health index.
- Intelligent management of the charging process, full that is, automatic power off, no security risks.
- Cloud data upload control, always know the operation status, the first time maintenance.
- ♦ Sturdy structure, each bin has an independent aerosol fire extinguishing device, safe and explosion-proof.

Dimensioned Drawing

Note: In millimeters





Equipment Parameters

Product Model	ES-DG12								
Detailed Specifications	Rated Power	9.6KW-800W/Slot(1200W/1500W /1800W is optional)							
	User	10.1Inch Screen (optional)							
	Size	25*25*40(cm)/32*25*43(cm)							
	Equipment Size	116*68*171.5(cm)							
	Input Voltage	AC220V							
Charging Equipment	Input Requency	45~66Hz							
Lquipment	Charging Port	2+4/2+6Plug Line							
	Output Voltage	43~87VDC							
	Weights	185Kg							
	Output Current Range	0-10A							
	Fire Fighting Methods	Aerosol Fire Fighting							
	Current Limit Protection Values	≥110%							
	Voltage Stabilization Accuracy	≤±0.5%							
	Stabilization Accuracy	≤±0.5%							
	Ripple Factor	≤±0.5%							
	Efficiency	≥98%							
	Power Factor	≥0.99(50%loads)							
Electrical	Harmonic Content THD	≤5%(50%loads)							
Indicators	Charging Mode	Scan The Code							
	Payment Methods	Scanning Code Payment/RFID Cards							
	Networking Methods	4G							
	Safety Function	Over-voltage protection, under-voltage protection, overloa protection, short circuit protection, grounding protection, over-temperature protection, low temperature protection, lightning protection. Optional features: flood protection. Hardware board exchange, reverse power supply, single compartment fan heating.							
	Operating Temperature	-35°C~+55°C							
	Operating Humidity	5%~95% Frost-Free							
Environmental Indicators	Working Altitude	<2000m							
	Protection Level	lp54							
	Cooling Method	Air Cooling							
	Noise Control	≤60dB							
	MTBF	100,000Hours							

ESINO Be a Global Brand in Swapping

Product Center

Swapping Charging Cabinets/ DC Battery Cabinets (ES-DG12) Extra Large Version

Applicable Scenarios

Battery charging and swapping cabinet is an intelligent equipment for charging and swapping lithium batteries, which can be used for charging and swapping many types and multiple lithium batteries at the same time. It is suitable for logistics, express delivery, takeaway, postal service, motorcycle sales points, neighborhood properties, rental housing, factories, schools, parks and attractions, business units, operation projects, etc.



Product Features

- Scanning the QR code (or the RFID Card for international version cabinet) on the cabinet screen with WeChat or APP, you can change the full-charged battery, the operation only takes 8 seconds, fast and convenient.
- ◆ Intelligent identification of lithium batteries and monitoring of battery health index.
- ♦ Intelligent management of the charging process, full that is, automatic power off, no security risks.
- ◆ Cloud data upload control, always know the operation status, the first time maintenance.
- ♦ Sturdy structure, each bin has an independent aerosol fire extinguishing device, safe and explosion-proof.

Dimensioned Drawing

Note: In millimeters





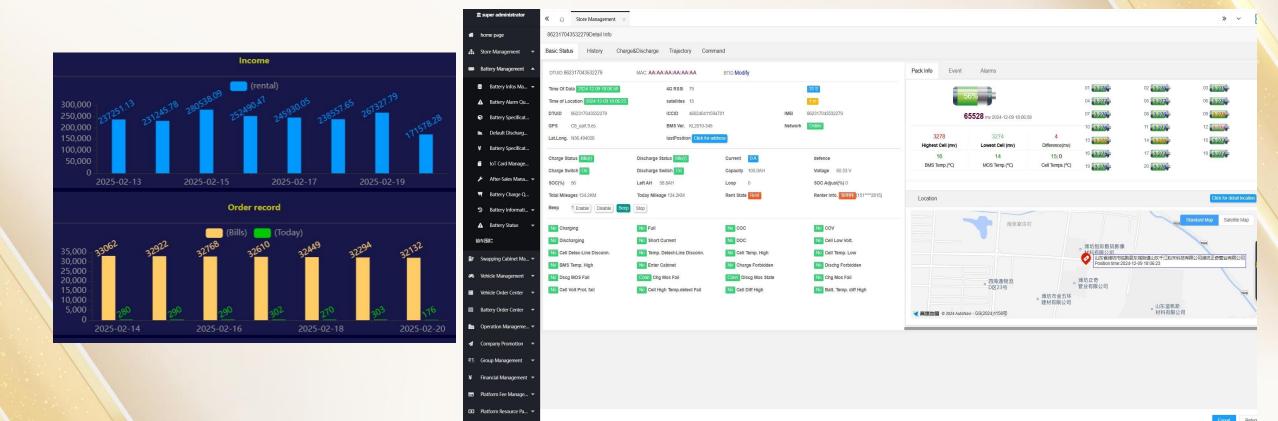
Equipment Parameters

Product Model		ES-DG12 Plus						
Detailed Specifications	Rated Power	9.6KW-800W/Slot(1200W/1500W /1800W is optional)						
	User	10.1Inch Screen (optional)						
	Size	25*25*40(cm)/32*25*43(cm)						
	Equipment Size	137*68*171.5(cm)						
	Input Voltage	AC220V						
Charging	Input Requency	45~66Hz						
Equipment	Charging Port	2+4/2+6Plug Line						
	Output Voltage	43~87VDC						
	Weights	185Kg						
	Output Current Range	0-10A						
	Fire Fighting Methods	Aerosol Fire Fighting						
	Current Limit Protection Values	≥110%						
	Voltage Stabilization Accuracy	≤±0.5%						
	Stabilization Accuracy	≤±0.5%						
	Ripple Factor	≤±0.5%						
	Efficiency	≥98%						
	Power Factor	≥0.99(50%loads)						
Electrical	Harmonic Content THD	≤5%(50%loads)						
Indicators	Charging Mode	Scan The Code						
	Payment Methods	Scanning Code Payment/RFID Cards						
	Networking Methods	4G						
	Safety Function	Over-voltage protection, under-voltage protection, overload protection, short circuit protection, grounding protection, over-temperature protection, low temperature protection, lightning protection. Optional features: flood protection. Hardware board exchange, reverse power supply, single compartment fan heating.						
	Operating Temperature	-35℃~+55℃						
	Operating Humidity	5%~95% Frost-Free						
	Working Altitude	<2000m						
Environmental Indicators	Protection Level	lp54						
	Cooling Method	Air Cooling						
	Noise Control	≤60dB						
	MTBF	100,000Hours						

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Applet Platform

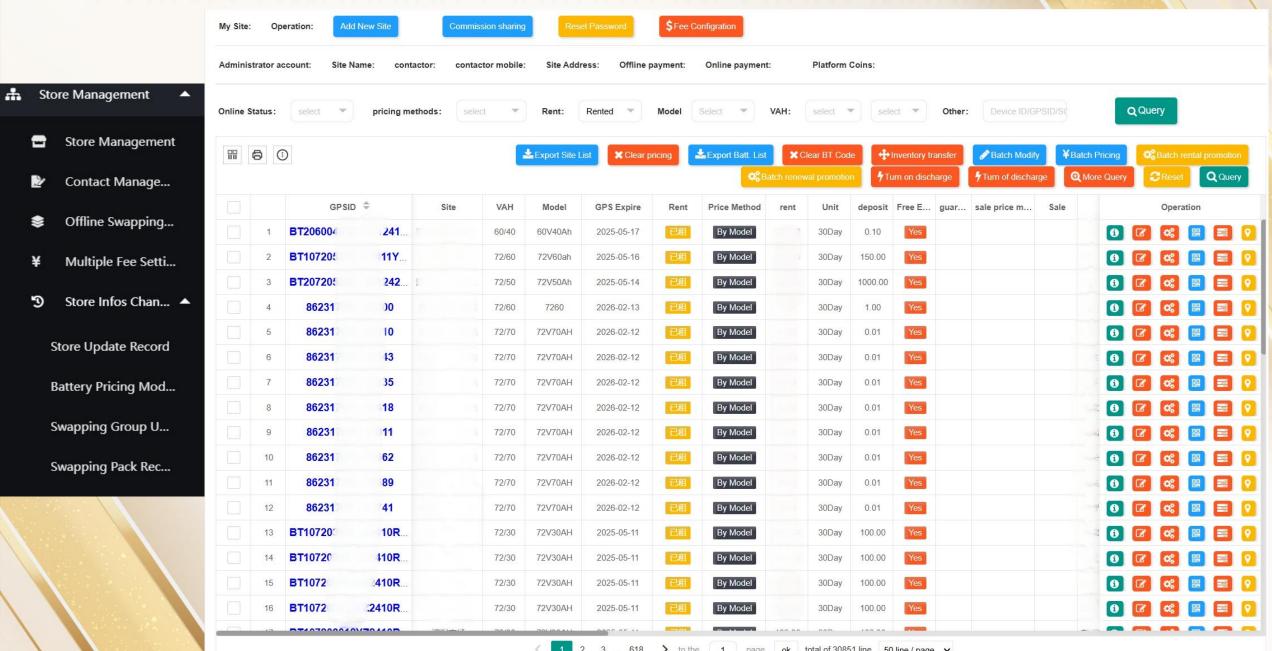
For Global Customer's own Swapping or Rental Battery /EV Scooter App,we will provide our protocol and API,and online software service team for make the connection



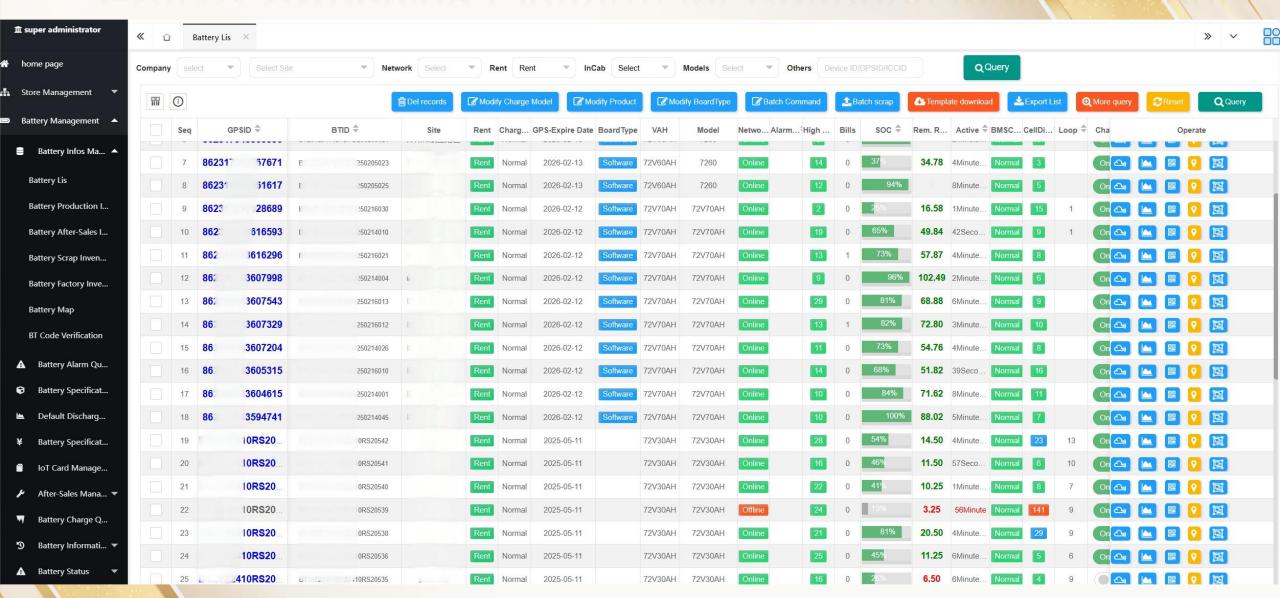
ESINO Swapping Platform Homepage

Total Battery	Rent Battery	Sold Battery	Idle Battery	Total Cabin	et	Online Cab	Offline Ca	b s	itoped Cab	Total Bills	Vaild Bills	Paused Bills	Ended Bills
171254	30934	10253	129842	1870		1098	772		0	106605	31097	939	74569
Online Battery	Offline Battery	Temporary	Longtime	Total Door	·s	Locked Doors	Error Doors	User Locked	LossBatt Door	Total Users	Bill Users	History User	s No-bill Users
60855	110399	951	75861	18033	;	470	7	463	57	125558	29469	55822	45298
Batt In Cab	Batt Out Cab	Temporary	Longtime	Battery InC	ab	Full InCab	Charge InCab	UnCharge	Other InCab	MobileAuth	RealName Auth	Payed Users	: Un-payed
6762	164492			7226		4418	4140	47		125557	92175	81780	35356
Alarm Batt	HighTemp Alarm	LowTemp Alarm	Other Alarm	Alarm Cabinet	HighTemp Ca	ab Fire Cab	Water Cab	Error Doors	Door Opended	Daily Active	Weekly Active	Monthly Acti	ve UnActive User:
4905	28			30	6			7	35				
Income			Daily Exchanges						New User(Byday)				
202 202 201 201 202 201 201 201 201 201					10,000 5,000				Add-byDay Rent-byDay Auth-byDay 350 308 309 308 309 309 309 309 309 309 309 309 309 309				
Order record				HourExchange				Daily Active					
(Bills) (Today) 35,000 33062 32972 32168 32610 32449 32732 25,000 25,000 15,000 10,000 5,000 26 20 20 20 20 20 20 20 20 20 20 20 20 20													

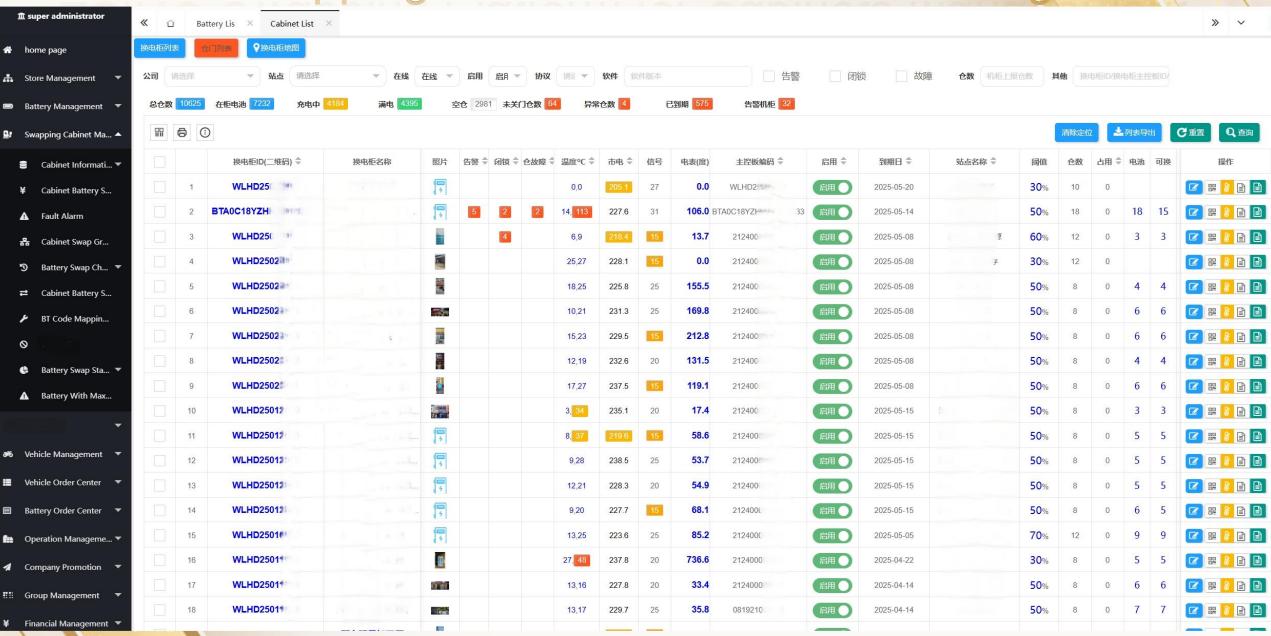
ESINO Swapping Platform for Store Management



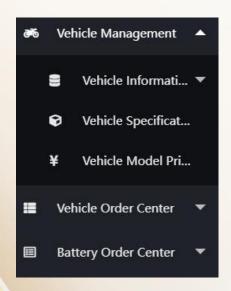
ESINO Swapping Platform for Batteries Management

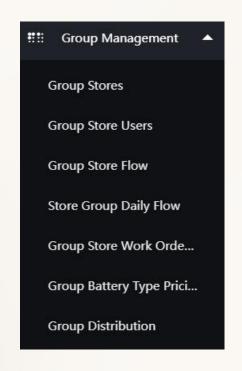


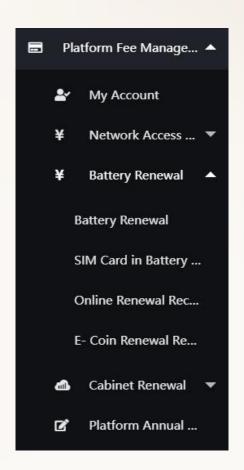
ESINO Swapping Platform for Cabinets Management

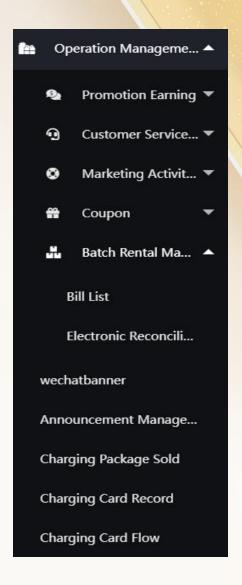


ESINO Swapping Platform for More Functions



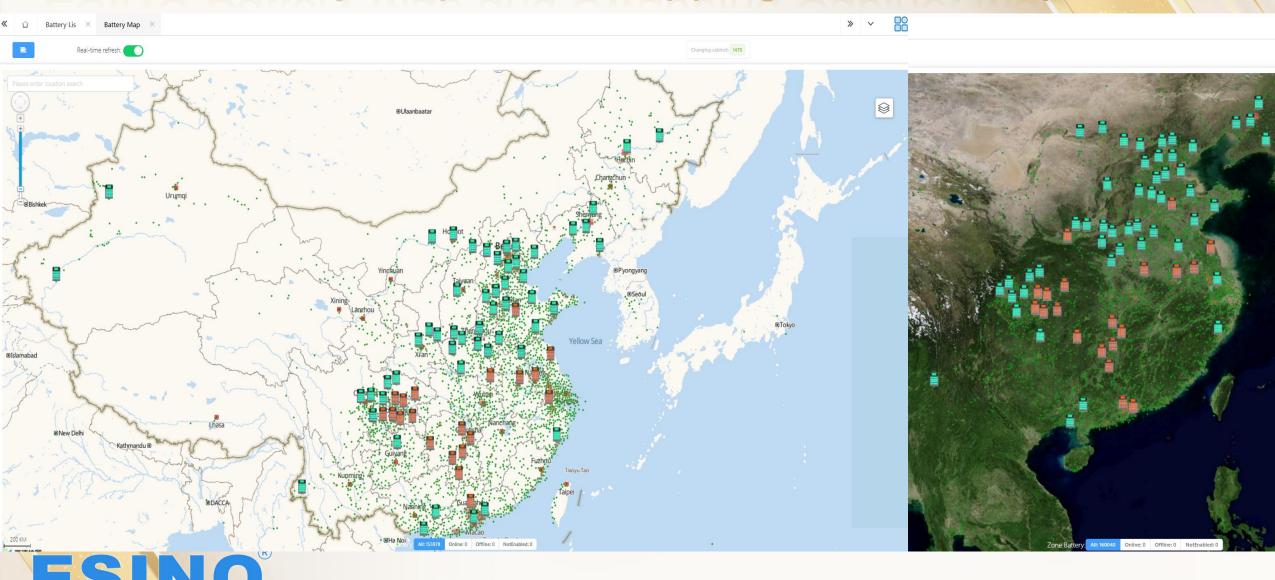








ESINO Battery Map and Swapping Cabinet Map



ESINO Certification

Customization

CERTIFICATE

Quality Management System GB/T 19001-2016 / ISO 9001:2015

24CN34513732Q 9144030076399149Y 1204, Blook B, Fencheng Zhigu Building, No.60 Tezi Road, Gongle Community, Xixung Shedutriet Baylan District, Shenuthen 1204, Blook B, Fencheng Zhigu Building, No.60 1204, Blook B, Fencheng Cang, Shedutriet Baylan District, Shenuthen, Gungalon, Linu No.31, 6F, Building 13, No.38, Lianhua Street, High-bed Industrial Development Zone, Zhenghou, Henan, China



ACM





Supports one stop full customization of brand logo, cabinet color, shape, slots, swapping applet, software and battery swapping platform API connection for foreign APP etc.



Our Parterner



































ESINO Swapping Cabinets Operation Scene in China









24 Hours Online Service

















City Partner

Site Selection / Solution Integration / Equipment Installation/ Technology Docking / Operation Service



Agent Distributor

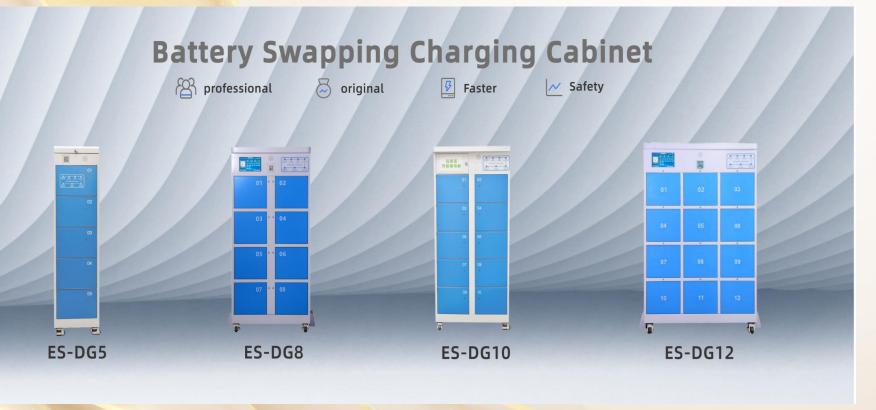
Program Support / Training Support / After-sales Support / Operation Service



City Operator

Program Support / Training Support / After-sales Support / Operation Service Platform Access / Financial Settlement / Traffic Support / Operation Management

Thanks For Reading





For more customized needss welcome contact us freely