

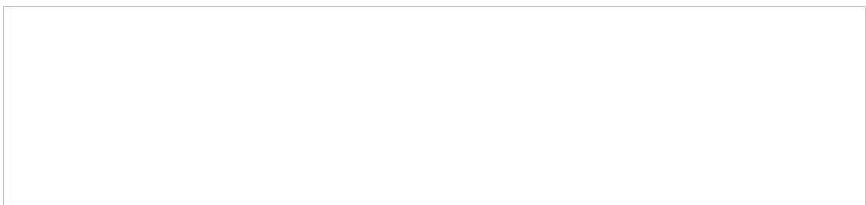


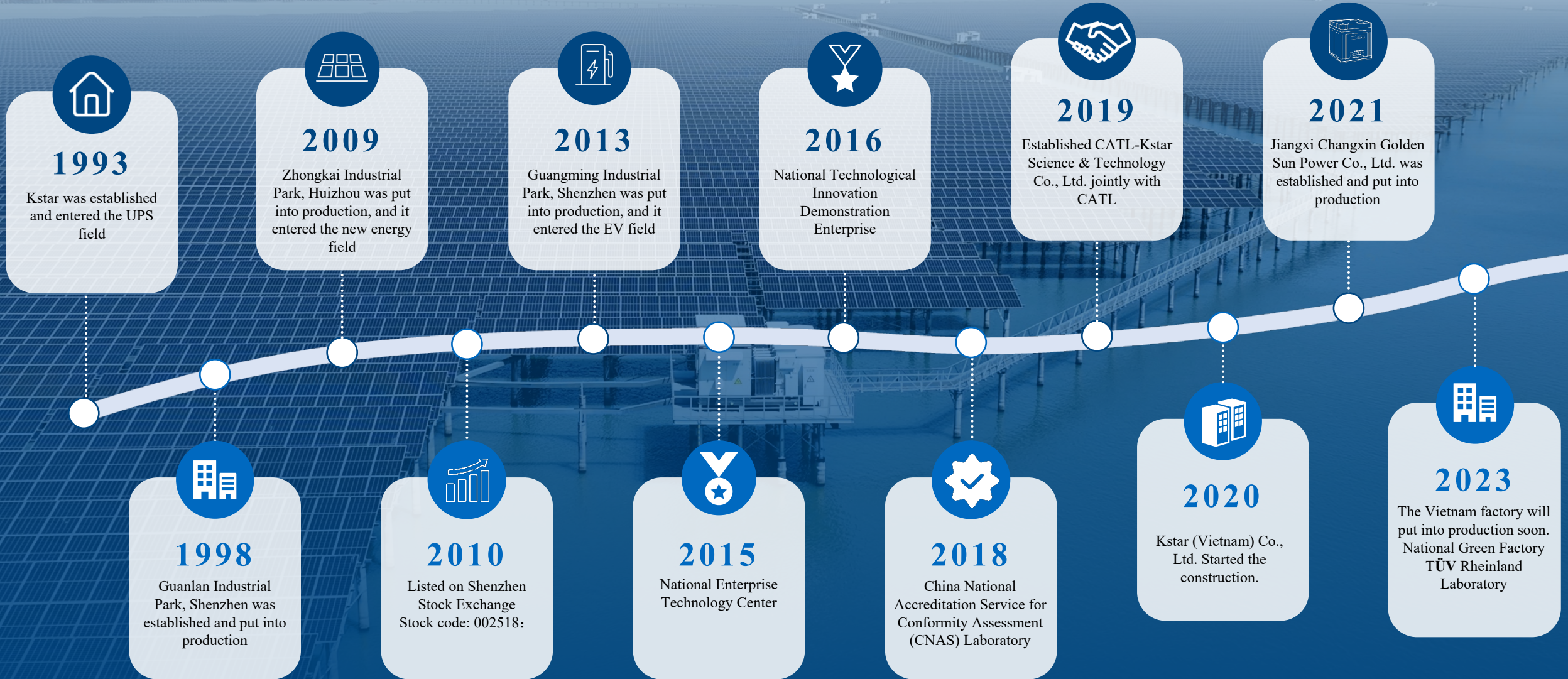
Shenzhen Kstar Science & Technology Co., Ltd



01

About Us







**2023 OMDIA
UPS global ranking**

Data source: UPS Hardware Market Tracker 2023 by Omdia.



**No. 1 sales of local UPS in
China for 22 years**

Data source: CCID Consulting
Annual Research Report on China's UPS
Product Market in 2022-2023



**No. 1 sales of Single-rack
MDC in China**

Data source: ICT research
Annual Report on China's Modular Data
Center Product Market in 2022-2023



**No. 1 sales of local UPS lead-
acid battery in China for 10
years**

Data source: ICT research
Report on China's UPS Supporting Lead-Acid
Battery Product Market in 2022-2023

>42GW ↑

Total shipment

10GW+ ↑

Annual Production
for PV Inverter and
ESS



>5GWh ↑

Total Shipment

10GW+ ↑

Annual Production
for PV Inverter and
ESS



No. 1 supplier

Cumulative shipment over
2GWh





2 R&D Centers

Shenzhen and Fuzhou



Shenzhen R&D Center



Fuzhou R&D Center



7 Manufacturing Bases

Guangming, Shenzhen; Huizhou, Guangdong; Guanlan, Shenzhen; Ningde, Fujian; Haiphong, Vietnam; Yichun, Jiangxi; Wuxi, Jiangsu



Guangming High-tech Zone Kstar Industrial Park, Shenzhen



Zhongkai High-tech Zone Kstar Industrial Park, Huizhou, Guangdong



CATL-Kstar Science & Technology Co., Ltd.



Kstar (Vietnam) Co., Ltd.



Fuyuan Kstar Industrial Park, Guanlan, Shenzhen



Jiangxi Changxin Golden Sun Power Co., Ltd.



Jiangsu Kstar Energy Technology Co., Ltd.



180+
Countries and regions



632
Technology patents (536)
Software copyrights (96)



101
Participation in preparation of
national and industrial technical
standards



630+
R&D personnel




4,200+
Employees

 **Technical service personnel**
450+

 **78 Technical service centers**

 **128 Technical service stations**

 **7×24h Response service**

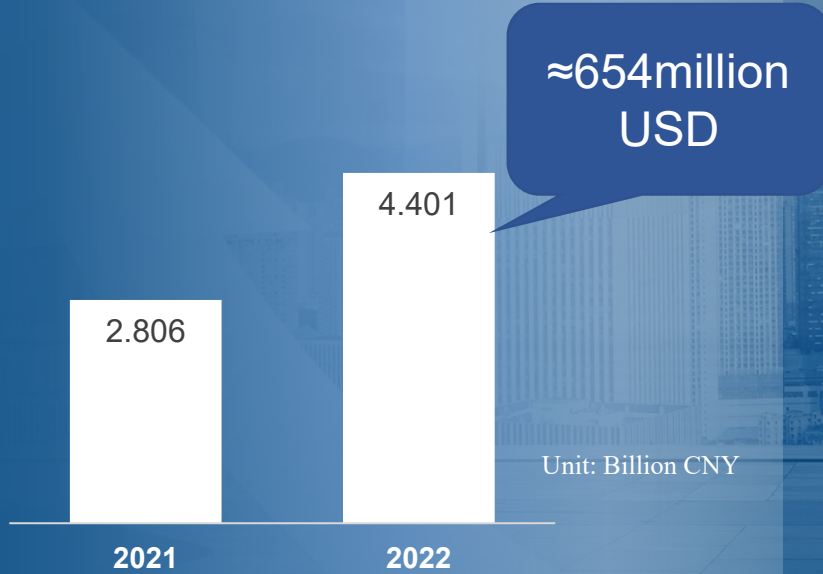
KSTAR, Always With You



Kstar operates in more than 180 countries and regions, insists on “customer focused”, brings high-quality services to all parts of the world, and creates greater value for customers.

2022

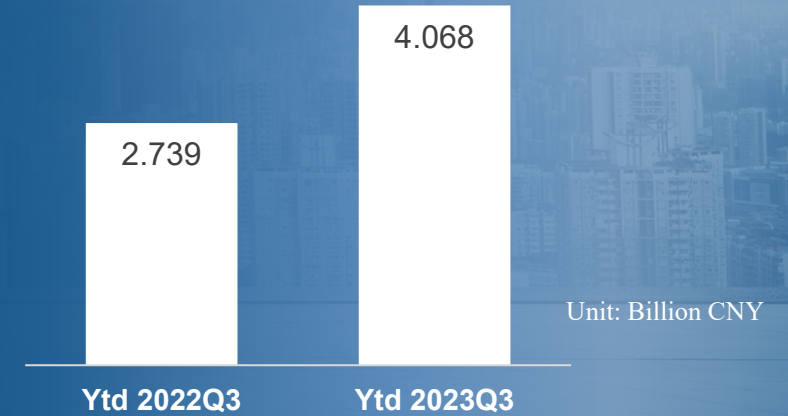
4.401 Billion CNY



+56.84% YoY ↗

Q1-Q3 of 2023

4.068 Billion CNY



+48.51% YoY ↗

Multiple national recognition honors



Certifications awarded by Global Certification Organization

ISO9001
Quality Management System Certification

KSTAR

ISO14001
Environmental Management System Certification

KSTAR

ISO27001
Information security management system certification

KSTAR

ISO50001
Energy Management System Certificate

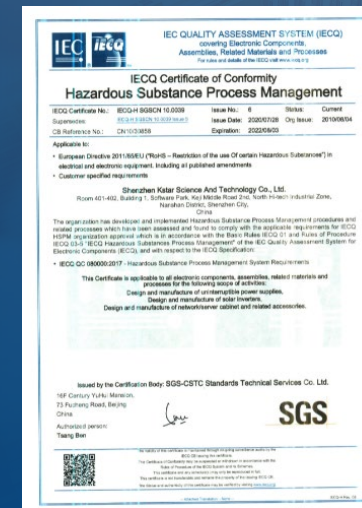
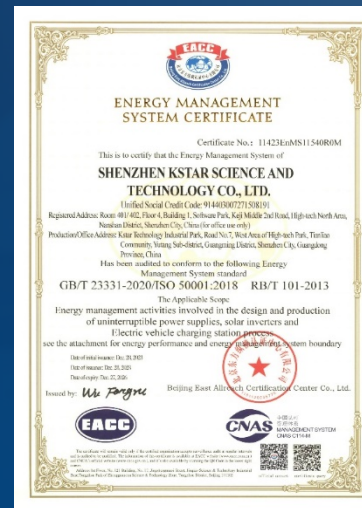
KSTAR

IECQ QC080000
Hazardous Substance Process Management System Certification

KSTAR

ISO45001
Occupational Health and Safety Management System Certification

KSTAR





ISO50001

Energy Management System Certificate

KSTAR



Greenhouse gas verification certificate

KSTAR



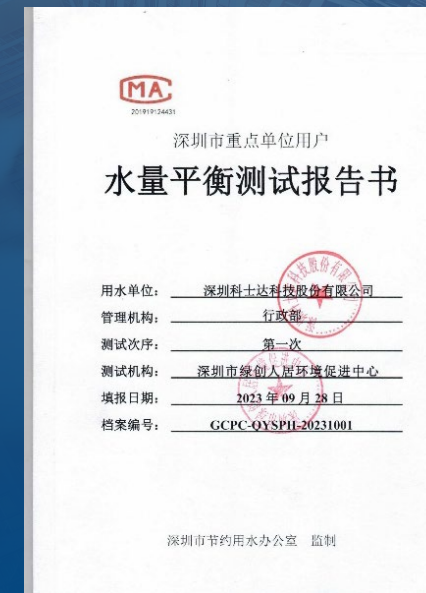
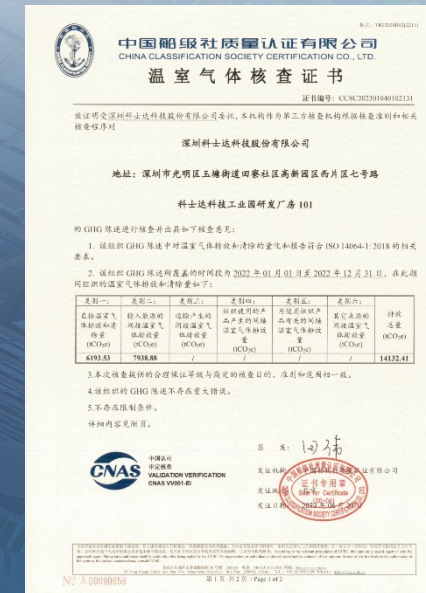
UPS Product Carbon Footprint Evaluation Report

KSTAR



Water Balance Test Report

KSTAR





China National Accreditation Service for Conformity Assessment (CNAS) Laboratory



TÜV Rheinland Laboratory



3m anechoic chamber



Electromagnetic emission (EMI) test



Electromagnetic immunity (EMS) test



Enthalpy difference laboratory



Environmental test (waterproofing/vibration/salt fog/sand dust)

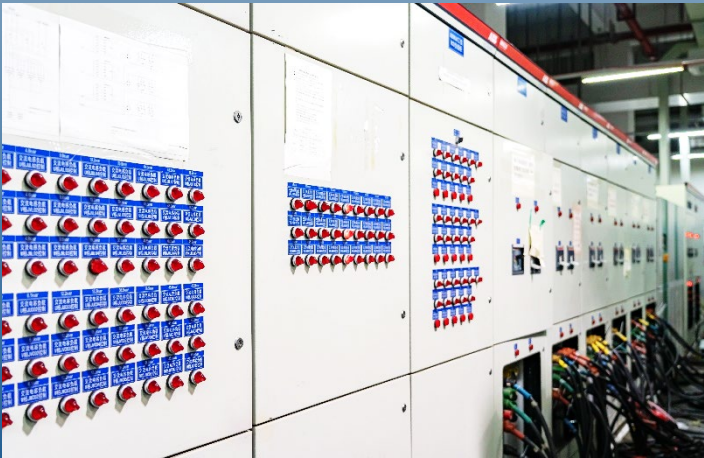


Semiconductor device test

China National Accreditation Service for Conformity Assessment (CNAS) Laboratory and TÜV Rheinland Witness Laboratory indicate that the management level, testing capability and overall strength of Kstar Testing Center have been recognized nationally and internationally.



Loading Test (5MW)



5000m² R&D test platform



2MW AC input source



1.7MW DC input source



Semiconductor failure analyzer



Precision magnetic component analyzer



Precision impedance analyzer



Vector network analyzer

Relying on 5000m² R&D test platform, test load (5MW) and other advanced equipment, the laboratory has achieved remarkable results in raw material inspection and device analysis, fully ensuring the quality of raw materials and devices.



Kstar supply chain system

Driven by lean management and intelligent manufacturing to build an excellent supply chain



Lean production

Overall visual management

Overall production maintenance

Total quality management

Continuous improvement of the whole staff

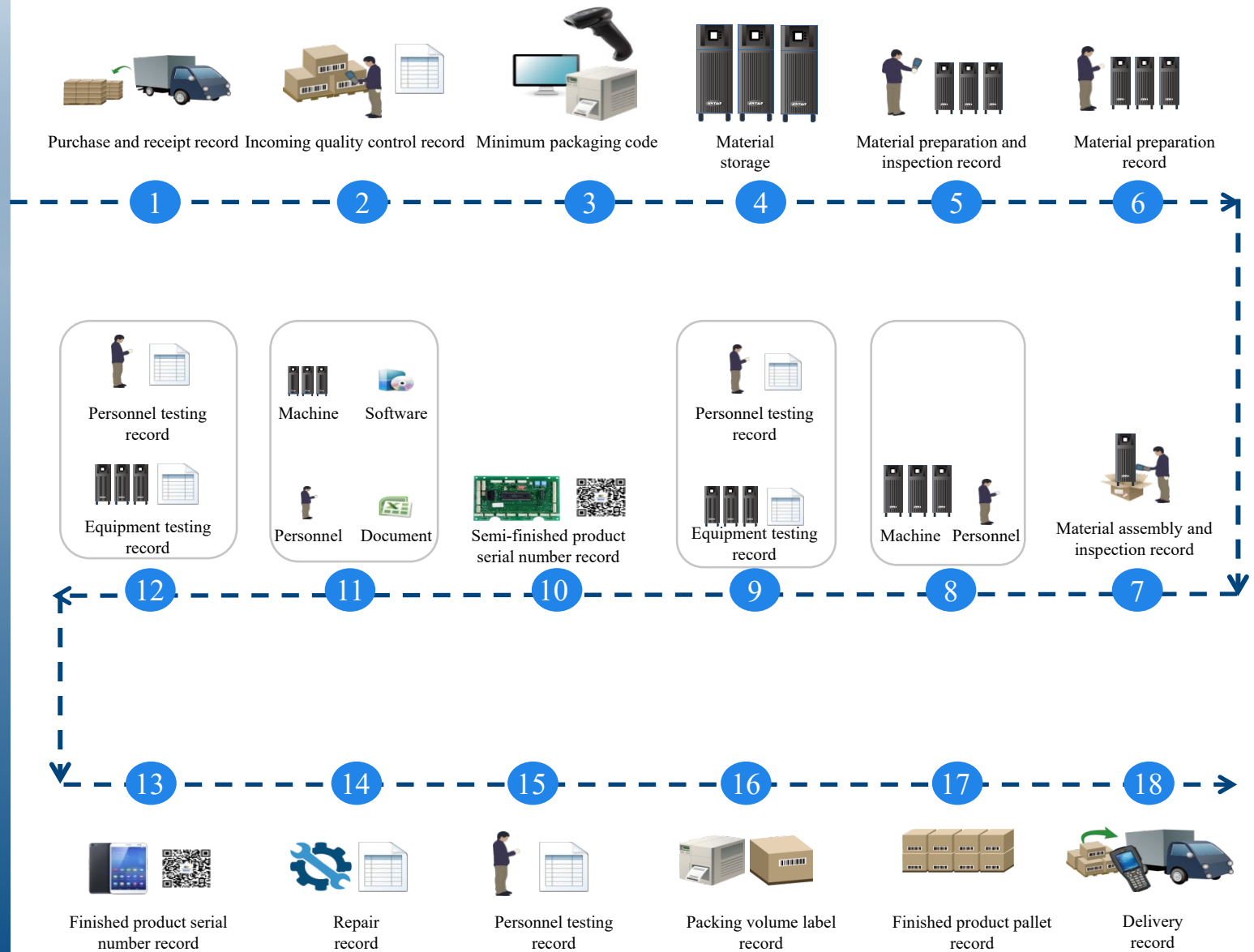
7S site management

Work safety management

Excellent Supply Chain System - Establishing the Whole-process Quality Traceability System

Relying on the Informatization Platform

Relying on the formalization platforms such as ERP, MES, QMS, WMS, SRM, PLM, OA, etc., establish the whole-process quality management system with "reliable quality, controllable process and traceable quality" based on bar codes, and achieve the forward and reverse traceability mechanism of all elements of product quality in the whole life cycle. It is supported by top level power electronics technology and rigorous and lean manufacturing capacity to ensure the best quality of products.



PCBA manufacturing



Electronic loading



Overall visual management



AOI automated optical inspector



Fully automatic three-proof coating

It has the most widely used and advanced 10 SMT production lines in the industry, which can achieve automated production of printing, tin paste thickness detection, patching, reflow soldering, 3D imaging AOI testing, etc.; 22 fully automatic coating lines; strict ESD prevention and control mechanism, completely eliminating the electrostatic hazards and ensuring the quality of products.

UPS manufacturing



UPS assembly area



Fully automatic test



Aging system

There are 28 operation lines, adapting to various operation modes. It has an ATE automatic test system to ensure that the performance of the power module is strongly guaranteed before simulation of the customer's on-site use. The aging process adopts the core patent technology of our independent intellectual property rights, which can effectively save the consumption of electric energy. A new harness process is introduced to ensure the standardization and consistency of the whole machine wiring.

Lead-acid battery manufacturing



Fully automatic cast welding



Fully automatic assembly line



Heat-sealed groove cover



Battery aging test

With 5 Automated production lines and an annual design capacity of 3 million kVAh, Kstar is a leading lead-acid battery supplier in the industry. Lead powder and alloy are all made of 99.994% high purity lead, and the charging and packaging process is strict to ensure the safety of use of each battery.

Lithium Battery Pack Manufacturing



Laser welding



PACK assembly



Fully automatic test



Automatic aging test

Intelligent robots are introduced into the production process to achieve whole-process automated production such as automatic loading by six-joint loading robots, four-axis servo SCARA robots and linear robot module stacking, fully automatic welding, laser welding, AOI automatic optical inspection and DCR testing.

Precision Cooling manufacturing



System assembly



Indoor unit



Outdoor unit



Precision Cooling test

A full range of precision cooling products with a cooling capacity of 3.5kW-300kW used in the data center. The production line is equipped with leak detection room, testing room, anti-dumping device and other supporting facilities, and Swiss advanced hydrogen and nitrogen leak detection equipment is used to provide 100% guarantee for the air tightness testing of precision cooling products before delivery.



EV Charger manufacturing



EV Charger assembly



Waterproofing system



Fully automatic test system



Aging system

The workshop already has multiple intelligent assembly production lines covering full power DC piles and intelligent ATE testing equipment. The future master plan is expected to double the capacity, achieve error proofing of feeding, assembly, testing and full-process MES system, automatic grabbing of test data, and E-SOP paperless operation. A large number of industry-leading Bosch tightening systems have been put into the highly flexible production lines, which can effectively control the screw torque and make the accuracy reach ± 0.01 . It has built a leading intelligent manufacturing factory in the charging pile industry.

PV Inverter and ESS manufacturing



PV assembly workshop



IGBT/MOS welding



Fully automatic test system

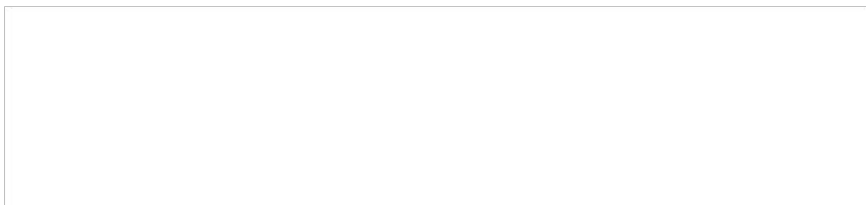


Large-machine fully automatic test system

The whole-process integrated automated production line adopts return flow pallet and flexible design of each station, which can achieve splitting reorganization and compatibility design; for the production of products of different sizes, automatic assembly, automatic handling, automatic initial test, automatic aging, automatic ATE 100% test and automatic palletizing can be achieved, and MES and digital presentation are available, ensuring the reliability of new energy inverters and energy storage products.

02

Products







UPS



Cooling & MDC



Lead-acid battery



Lithium battery



High-frequency medium/small capacity UPS
0.6kVA ~ 40kVA



High-frequency modular UPS
100kVA module



High-frequency medium/large capacity UPS
50kVA ~ 1200kVA



Transformer-based UPS
1kVA ~ 800kVA



Integrated UPS power module
UPS system capacity up to 2400kVA
(600kVA × 4)



Single-cabinet/Single-rack
MDC



Double-rack MDC



Intelligent monitoring platform for data
center infrastructure



Precision Cooling
3.5kW~250kW



Outdoor Container Data center
Stand-alone/Assembled



FM sealed battery series
(6V/12V 1.2Ah ~ 250Ah)



GFM sealed battery series
(2V200Ah ~ 3000Ah)



GFMHR high-rate sealed battery series
(12V250W ~ 780W)



Residential ESS lithium battery system
(5KWh)



C&I ESS lithium battery system
(100KWh ~ 373KWh)



AGEL sealed gel battery series
(12V38Ah ~ 2V3000Ah)



FMH sealed battery series
(12V50Ah ~ 200Ah)



EVF power sealed battery series
(6V/12V80Ah ~ 200Ah)



BTS communication lithium battery system
(51.2V100Ah ~ 280Ah)



Climbing engineering truck lithium battery system
(51.2V300Ah ~ 357Ah)



Beijing 2008 Olympic Games



West-East Gas Pipeline Project



The Three Gorges Hydroelectric-Complex Project



Hangzhou 2022 Asian Games



Phase 1 of the Horinger New District Project of the Financial Technology Center of the Head Office of the Bank of China



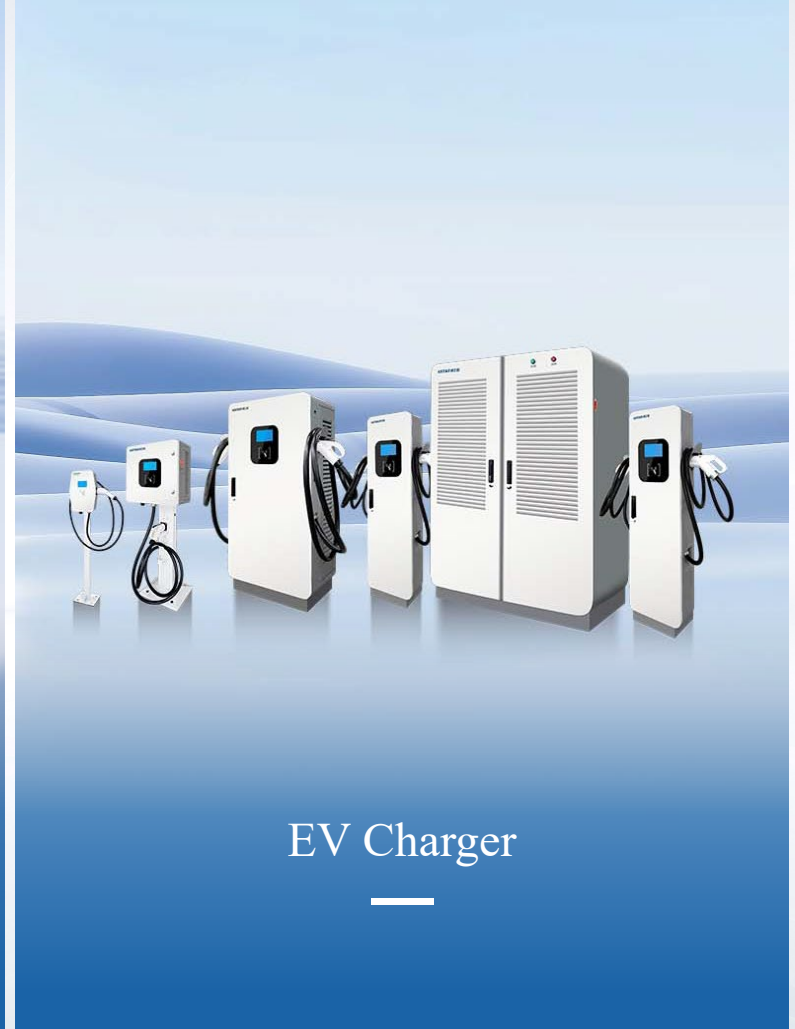
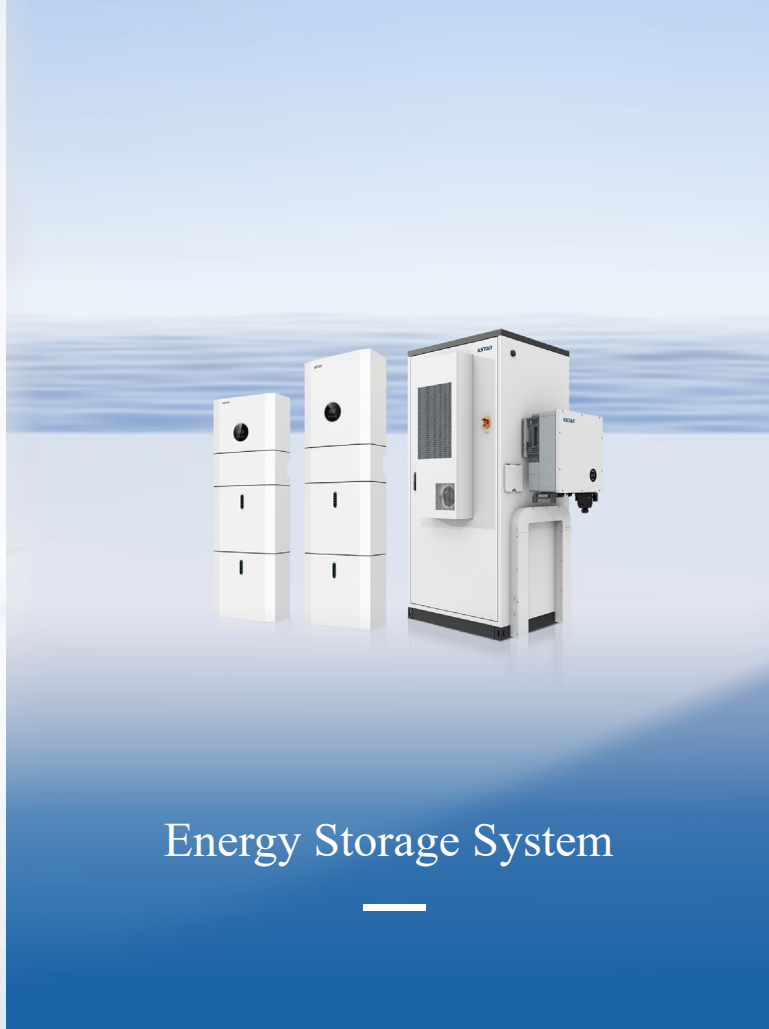
2023 Information Park B15b Data Center Optimization and Transformation Power Supply Project of Shanghai Telecom



BAIDU Changzhou Data Center



Guangzhou Nansha No. 4 & Foshan Lanwan No. 5 Data Centers of Glory Data





Residential Inverter
3-40kW



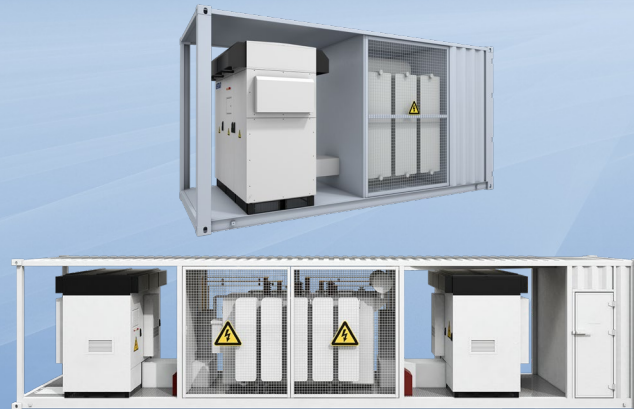
C&I Inverter
50-125kW



Utility Power Plant String Inverter
250/350kW



Central Inverter and Combiner Box
2500/3125kW



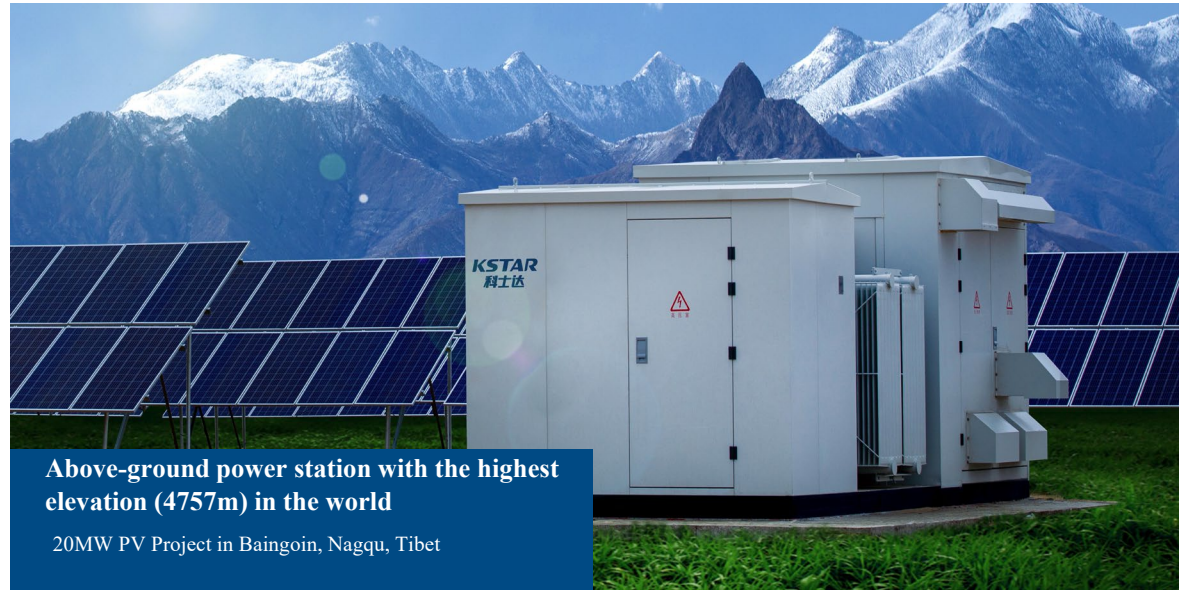
Turn Key Solution
(Inverter+MV Transformer+RMU)
2500/3125/5000/6250kW



Intelligent Monitoring
Product and Cloud Platform



The largest PV power station in Europe
SOLAR FARM 500MW PV Project in Ukraine



Above-ground power station with the highest elevation (4757m) in the world
20MW PV Project in Baingoin, Nagqu, Tibet



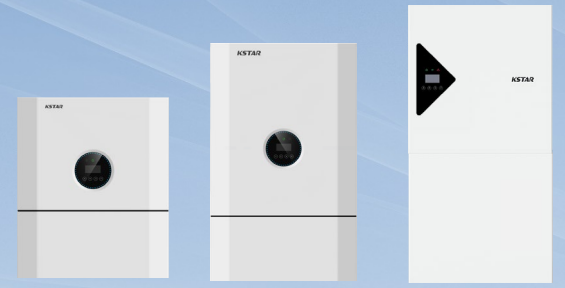
The first batch of single parity PV power stations in China
Anda 600MW Parity On-Grid Project in Heilongjiang



The largest surface PV power station in the world
Taihan 550MW Fish-Light Complementation PV Power Generation Project in Wenzhou



Residential Hybrid Inverter



Single-phase 3-6kW Three-phase 8-12kW Split phase 8-15kW (American standard)

C&I ESS Inverter



50kW hybrid inverter 120kW hybrid inverter

Power station ESS Inverter



200kW string inverter 1.725MW Central Converter

Residential EES Battery



5.12kWh 5kWh (American standard)

C&I ESS Battery Cabinet



100kWh air-cooled battery cabinet 233kWh air-cooled battery cabinet 372/418kWh liquid-cooled battery cabinet

On/Off-grid switching cabinet and intelligent microgrid integrated cabinet

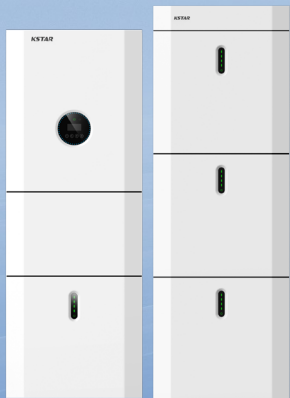


100kW/250kW On/off-grid switching cabinet

Residential ESS Solutions



Residential Single-phase All In One ESS



Three-phase All In One ESS



Split phase PV All In One ESS (American standard)

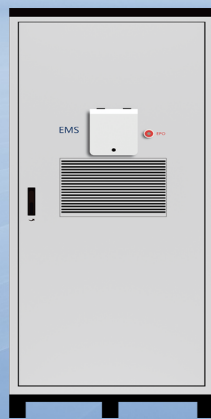
C&I ESS Solutions



50kW/100kWh All In One ESS



120kW/233kWh All In One ESS



100kW/250kW/500kW on/off-grid switching cabinet (optional for off-grid or on/off-grid)



250kW/360kW intelligent microgrid integrated cabinet (used for microgrid)

Power station energy storage on-grid solutions



1.725MW/3.45MW Box inverter All In One ESS



372kWh~3.72MWh Liquid cooling integration scheme (scalable)

Residential ESS



Residential ESS Project in Belgium



Residential ESS Project in Netherlands

C&I ESS



C&I ESS Project in Shaoxing, Zhejiang

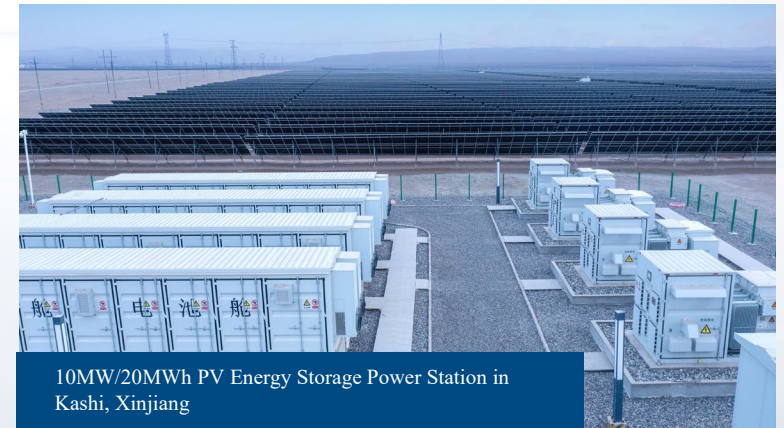


Shanghai World Expo Garden Industrial and Commercial Energy Storage Project

New energy storage power station



10MW/50MWh Energy Storage Project in Shigatse, Tibet



10MW/20MWh PV Energy Storage Power Station in Kashi, Xinjiang



30kW/40kW Charging Modules



20kW ~ 360kW DC Integrated Charger



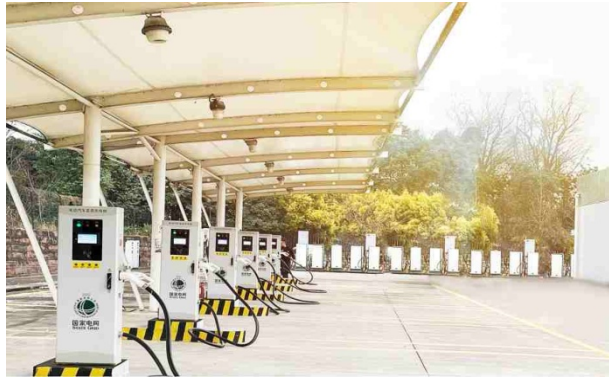
7kW AC Charger



240kW ~ 720kW DC Distributed Charger



EV Charger Operation Management Platform



State Grid



China Southern Power Grid



Sinopec



CNPC



China Potevio



China Tower

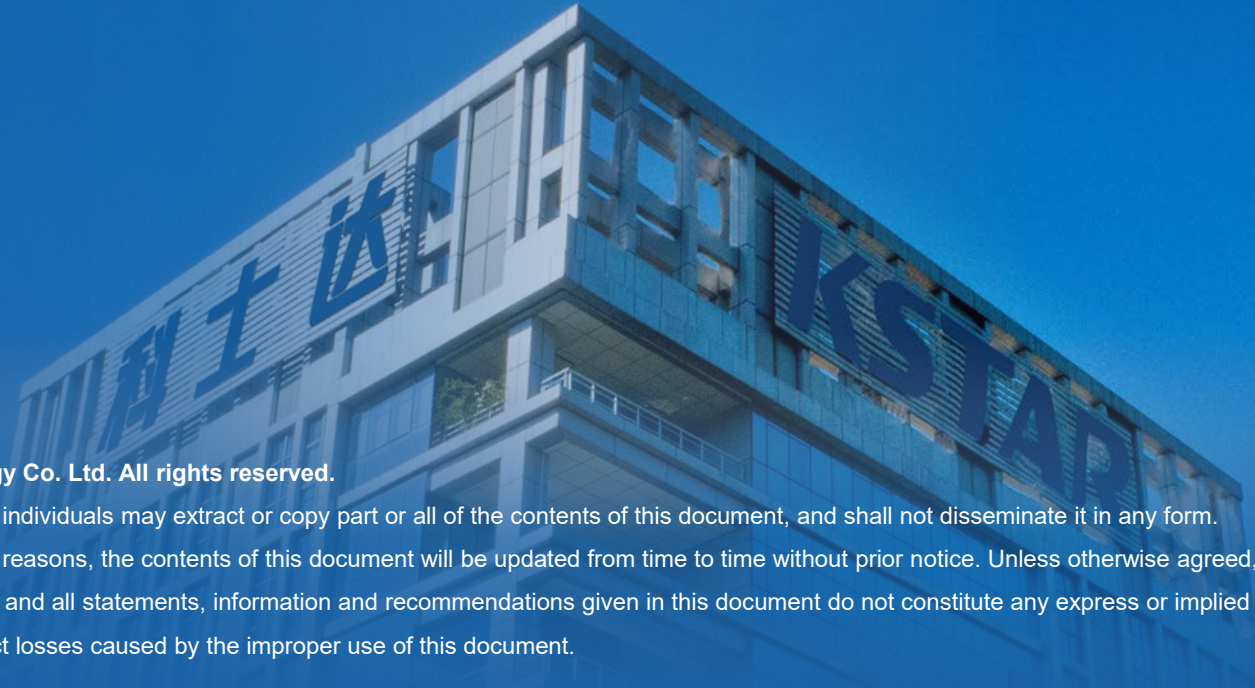


Wuxi municipal administration



Changchun highway passenger transport

Customer Focused, Quality Oriented



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Kstar



Kstar New Energy