

智慧能源整体解决 方案服务商

SMART ENERGY INTEGRATED
SOLUTIONS PROVIDER



懂能源 ⚡ 更懂你

JOYSON ELECTRONICS

The global provider of first-class auto parts and technical services

Intelligent cockpit

New energy electric control

Automotive safety

Intelligent driving

30
countries

40000+
staff

4
business
units

5300
R&D staff

2
research
institutes

5000+
patents

70+
global sites

3
billion RMB
per year



Development History

Early days of entrepreneurship

2004-2007

- **2004** Company was established
- **2005** Began supplying parts to leading companies such as VW, GM and Ford

Global expansion

2014 - 2017

- **2015** Acquired QUIN GmbH

Independent growth

2020 - 2023

- **2021** Established JOYCHARGE Brand

- **2009** Became a global supplier of GM
- **2013** Established the functional components BU of Joyson Electronics

2008 - 2013

Rapid development

- **2018** Established Ningbo Joyson New Energy Co., & Nanjing New Energy R&D
- **2019** Renamed as JOYSONQUIN

2018 - 2019

Strategy alignment

上汽大众ID.4X

核心零部件配套供应商一览(更新版)

电池管理系统 (BMS)

PREH

Smart AC WB

JOYSONQUIN

Installation service

JOYSONQUIN

Charging port cover

JOYSONQUIN

Telematics applications

JOYNEXT

Occupant airbags

JOYSONSAFETY

Distal Airbag

JOYSONSAFETY

Seat belts

JOYSONSAFETY





K431、P319、P519、V536、V551
S60、XC40、极星、XC90、EX90

Air Management System
(air vents, air ducts)

Interior Trim Parts
(Real wood)



CM1E\CM2E CS1E CX1E
EX1E V51DK

Air Management System
Rearview Mirror
Smart charging port cover
Real Wood Trim

ZEEKR Home AC Charger

GEELY Automobile Group Home
Charger Installation Service

均悦充
JOYCHARGE

——Service provider of high quality smart energy in ecology



JOYCHARGE was established in 2021, is the intelligent energy overall solution service provider under JOYSONQUIN. Backed by the group's background, it has 5 R&D centers, 12 manufacturing bases, more than 400 patents and 500 research and development staffs. With new energy vehicle charging operation service as the cornerstone, we aim to build a win-win six-in-one energy service network of light, storage, charging, distribution, exchange and discharge.

JOYCHARGE specializes in the research, development and manufacturing of new energy vehicle charging equipment and infrastructure construction and operation. With the core research and development capabilities of intelligent control, Internet of Things, and high-power customization, the brand builds **an intelligent big data service platform and an operation and service management platform** to solve the charging anxiety and promote the construction of smart cities through refined operation.



Photovoltaic
Wind Power



Energy storage
system



Charging
system



Power distribution
system



Power exchange
system



Discharge
system



OUR CULTURE

VISION

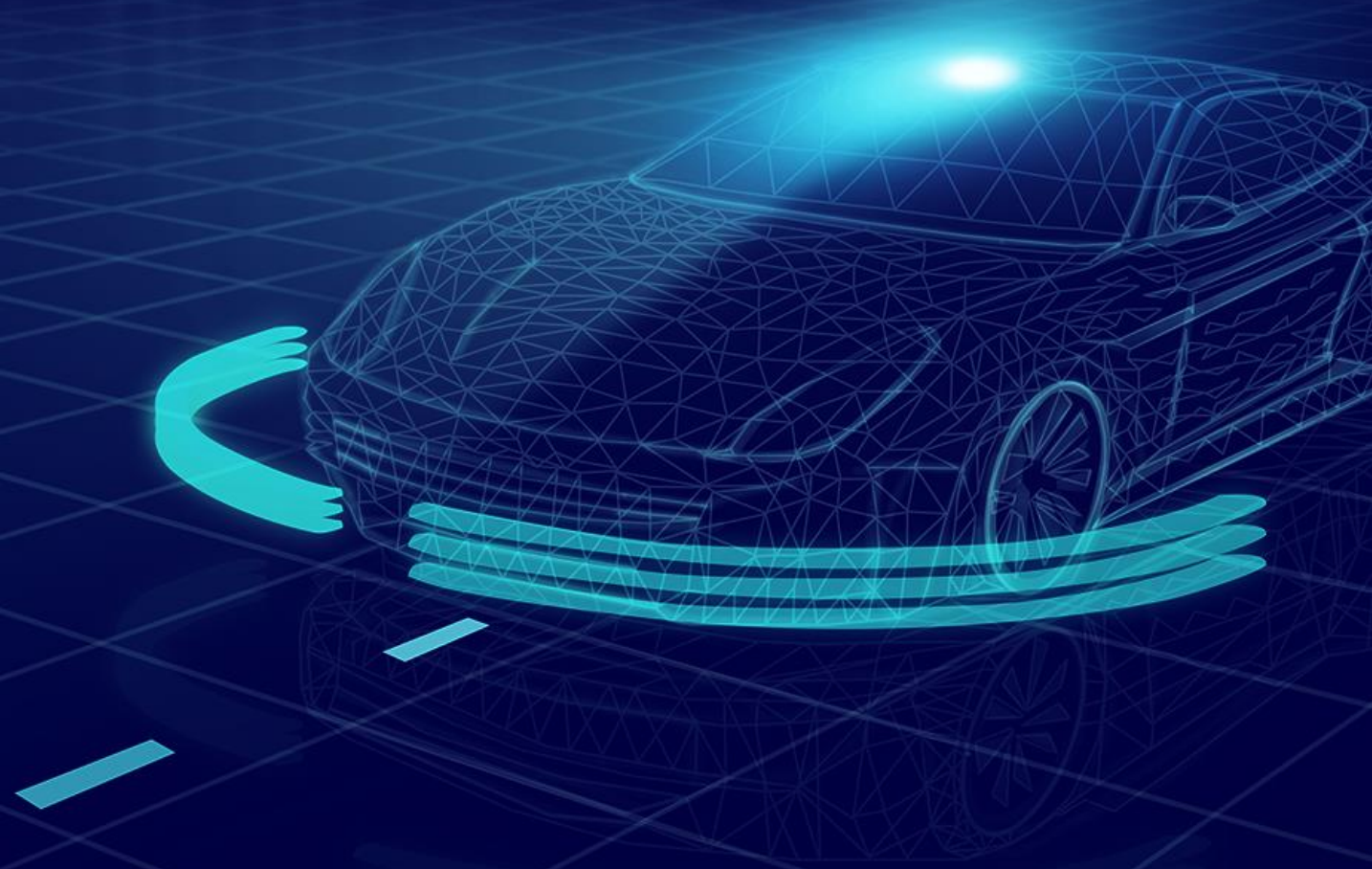
The Leader In Smart Energy
Integrated Solutions Provider

SLOGAN

EXPERT IN ENERGY
ENJOY IN CHARGING

MISSION

Constructing a green charging
network and sharing a smart energy
ecosystem



01 SOLUTIONS

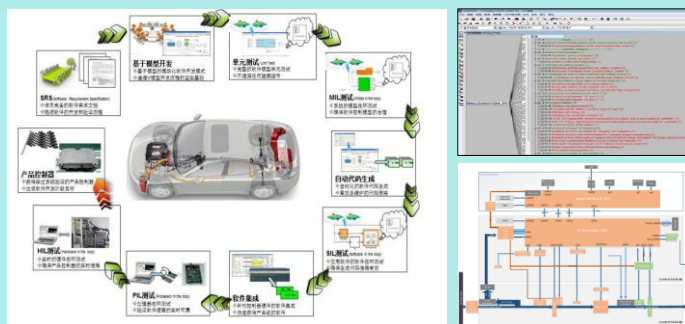




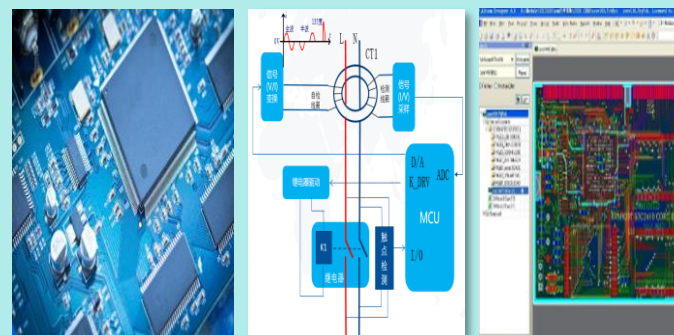
— CORE COMPETENCY —

Full competence for Automotive Electronics Design !

System RE, Structure, FMEA



Hardware EMC, Power supply, Electrical Des.



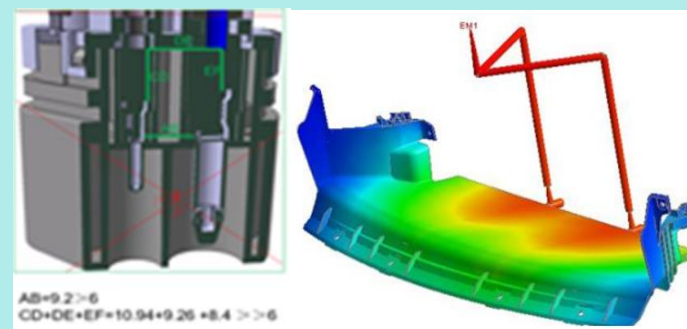
Cloud Dev. OCPP2.0, Big Data Mana.



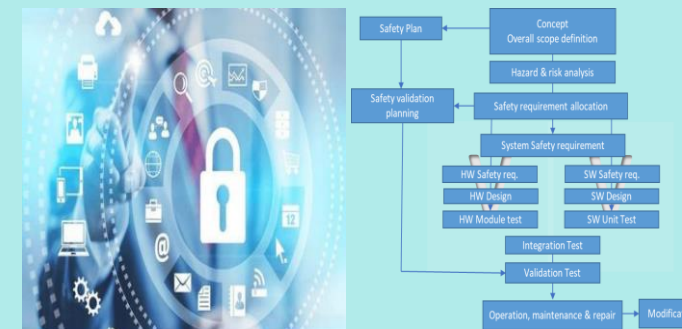
Software AUTOSAR, Platform



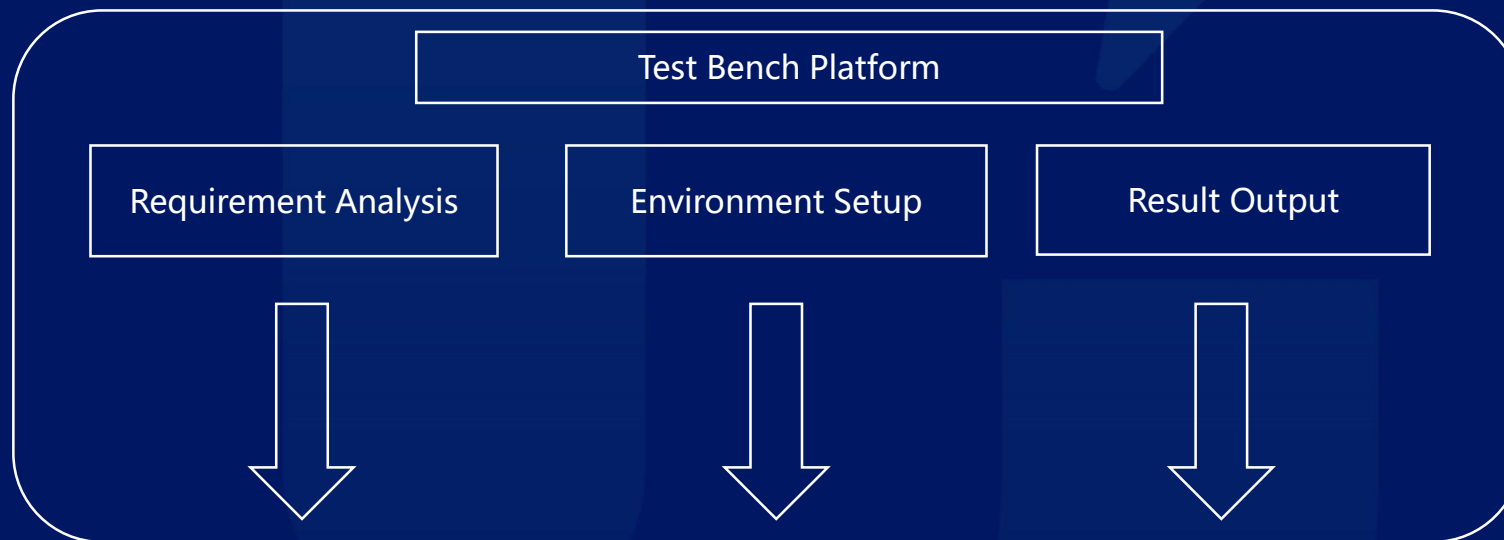
Mechanical 2D/3D, Tolerance Cal., CAE



ISO 26262, 21434 Functional Safety & Information Security



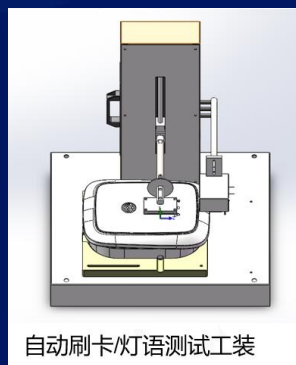
Full competence for Wallbox Test Bench Design !



Test Bench Environment



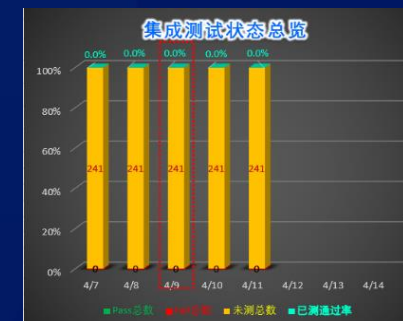
Test Equipment



自动刷卡/灯语测试工装



Automated test interface



Result Analysis

LAB



JOYSON – Laboratory

Area: 2000m²

NO. of personnel : ~ 25

Test equipment: 81



JOYSONQUIN – Laboratory

Area : 1200m²

NO. of personnel : ~13

Test equipment : 101



JOYSONQUIN NEW ENERGY-
Multifunctional Laboratory

Area : 1300m²

NO. of personnel : ~10

Test equipment : 56



Communication standards



Communication
interface

online:
4G

offline:
Bluetooth



Communication
protocols

To EV:
GBT 18487

Backend
OCPP v2.0.1

Safety & Testing



IP55 & IK10

RCD

(DC 6mA /
/ AC 30mA)



Surge
protection



Grounding
protection



Current overload
protection



Function safety
standard ISO 26262



-40°C ~ 55 °C



CQC Certified
(China Quality
Certification Centre)

Production Insights



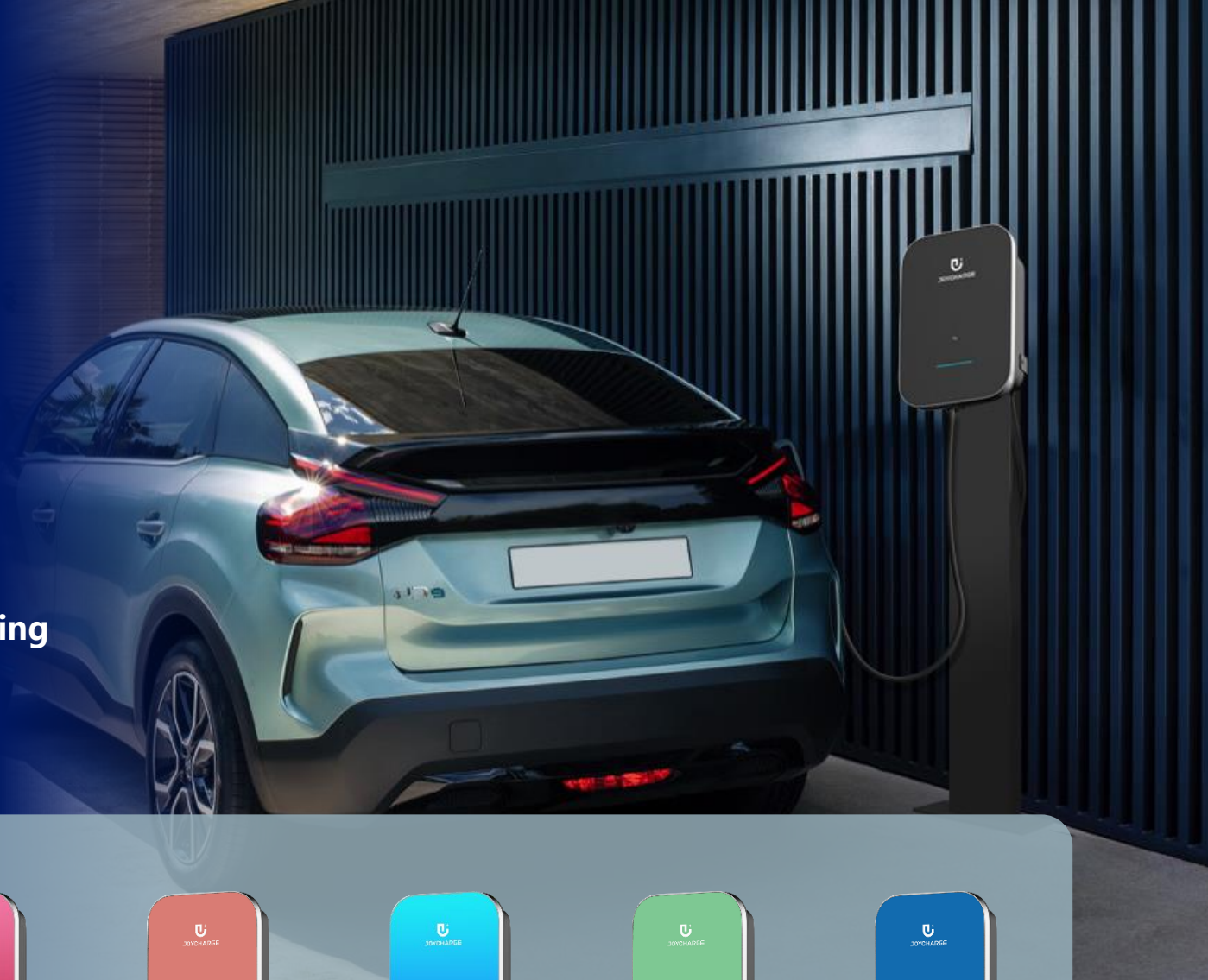


— SMART AC WALLBOX —

WANG

7kW

- ⚡ **Rated Power: AC220V**
- 📏 **Product Dimension: 322*230*95mm**
- 🔌 **Cable Length: 5m**
- 📶 **Communication: 4G**
- 🔋 **Charging methods : APP/ RFID Card /Timed Charging**



YUAN

7kW

- ⚡ **Rated Power: AC220V**
- 📏 **Product Dimension: 260*260*100mm**
- 🔌 **Cable Length: 5m**
- 📶 **Communication: 4G**
- 🔋 **Charging methods: APP/ RFID Card /Timed Charging**



JING

11kW/21kW



⚡ **Rated Power: AC380V**

📏 **Product Dimension: 317*198*95mm | Cable Length: 5m**

📶 **Communication: 4G, WIFI, Ethernet, Bluetooth, RS485**

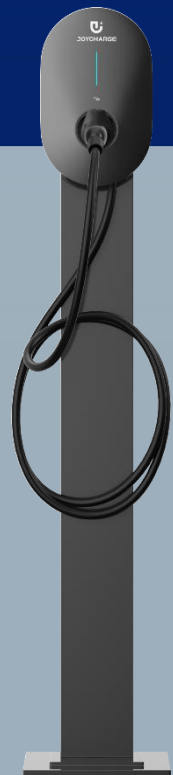
🔋 **Charging methods: APP/ RFID Card /Timed**

Charging/Dynamic load-balancing(optional)



XIANG

7kW/11kW/22kW



⚡ **Rated Power: AC400V**

📏 **Product Dimension: 317*198*93mm | Cable Length: 5m**

📶 **Communication: 4G, WIFI, Ethernet, Bluetooth, RS485**

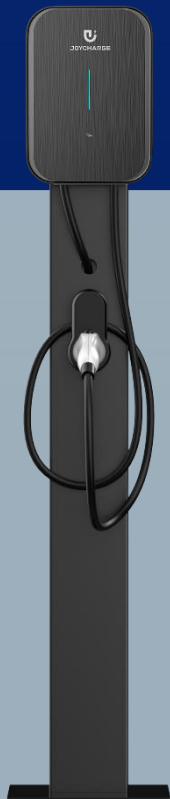
📱 **Charging methods: APP/ RFID Card /Timed**

Charging/Dynamic load-balancing(optional)



XIAOMAN

7kW



- ⚡ **Rated Power: AC220V**
- 📏 **Product Dimension: 322*230*95mm | Cable Length: 5m**
- 📶 **Communication: 4G, Bluetooth**
- 🔋 **Charging methods: APP/ RFID Card /Timed Charging**



均悦充充电站

JOYCHARGE CHARGING STATION





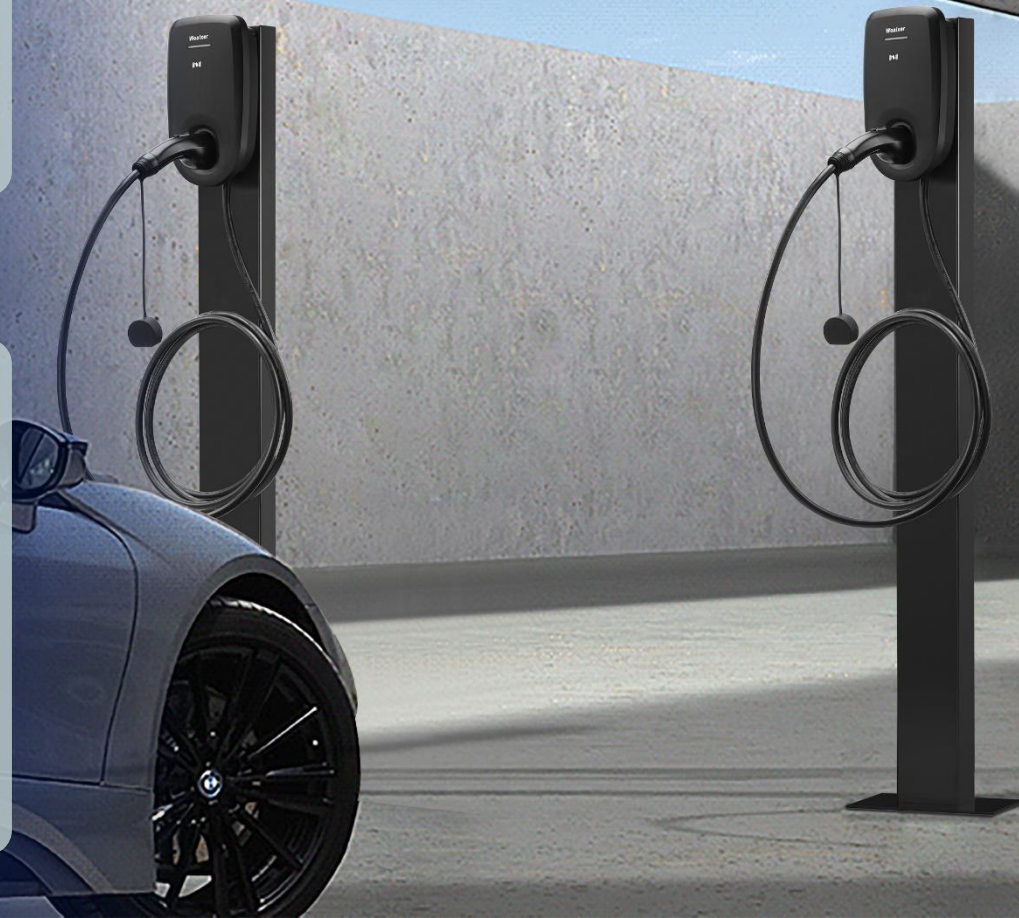
BOX 7kW

- ⚡ Rated Power: AC220V
- 📏 Product Dimension: 285*65*168mm
- 📶 Cable Length: 5m
- 📱 Charging methods: RFID Card



LAN 7kW/11kW

- ⚡ Rated Power : AC220V / AC380V
- 📏 Product Dimension: 400*300*120mm
- 📶 Cable Length: 6m
- 📶 Communication: 4G
- 📱 Charging methods: APP/ RFID Card /Timed Charging





— SMART DC WALLBOX —

BAI

20kW/30kW



- ⚡ **Rated Power: AC380V**
- 📏 **Product Dimension: 410*216*620mm**
- 🔌 **Cable Length: 5m**
- 📶 **Communication: 4G/Ethernet**
- 🔋 **Charging methods: Code Scanning/ RFID Card / Password**

BAI

60kW/120kW



- ⚡ **Rated Power: AC380V**
- 📏 **Product Dimension:**
1620*750*560mm
- 🔌 **Cable Length: 5m**
- 📶 **Communication: 4G/Ethernet**
- 🔋 **Charging methods: Code
Scanning/ RFID Card / Password**



BAI pro 60-120kW/ 180-240kW



- ⚡ **Rated Power: AC380V**
- 📏 **Product Dimension:**
1620*750*560mm
- 🔌 **Cable Length: 5m**
- 📶 **Communication: 4G/Ethernet**
- 🔋 **Charging methods: Code**
Scanning/ RFID Card / Password /
VIN-CODE





PORTABLE CHARGER

CHANG MINI

3kW



- ⚡ Rated Power: AC220V | Rated Current: 13A
- 📏 Product Dimension: 98*66*28mm
- 🔌 Cable Length: 5m/15m
- 🔋 Charging methods: Plug-and-charge

CHANG PRO

3kW



- ⚡ Rated Power: AC220V | Rated Current: 13A
- 📏 Product Dimension: 160*83*45mm
- 🔌 Cable Length: 5m
- 🔋 Charging methods: Plug-and-charge



CHANG PLUS

3.5kW



- ⚡ Rated Power: AC220V | Rated Current: 16A(Adjustable current)
- 📏 Product Dimension: 235*92*53mm
- 🔌 Cable Length: 5m
- 🔋 Charging methods: Plug-and-charge / Timed charging

CHANG PLUS

3.7kW



- ⚡ Rated Power: AC230V | Rated Current: 16A(Adjustable current)
- 📏 Product Dimension: 235*92*53mm
- 🔌 Cable Length: 5m
- 🔋 Charging methods: Plug-and-charge / Timed charging



CHANG 3.5kW

L



- ⚡ Rated Power: AC220V | Rated Current: 16A
- 📏 Product Dimension: 220*94*72mm
- 📏 Cable Length: 5m
- 🔌 Charging methods: Plug-and-charge

CHANG 3.7kW

L



- ⚡ Rated Power: AC220V | Rated Current: 16A
- 📏 Product Dimension: 186*65*46mm
- 📏 Cable Length: 5m
- 🔌 Charging methods: Plug-and-charge



**CHANG
MAX**

3.7kW / 7.4kW



Rated Power: AC230V | Rated Current: 16A



Product Dimension: 200*100*55mm | Cable Length: 5m



Charging methods: Plug-and-charge



A blue-tinted photograph of a car being charged with a solar panel setup. The car is parked outdoors, and a charging cable is plugged into its side. In the foreground, a solar panel is set up on a wooden deck, connected to a power station and a battery pack. The background shows trees and a clear sky.

PERIPHERAL PRODUCTS

FUN PRO

2.2kW Discharge Plug



⚡ Rated Power: AC220V | Rated Current: 10A

📏 Product Dimension: 206*65*250mm

FUN S

3.5kW Discharge Plug



⚡ Rated Power: AC220V

Rated Current: 16A

📏 Cable Length: 5m

Type2 EV Charging Cable

11kW/22kW



- ⚡ Rated Power: AC480V
- 📏 Rated Current: 16A/32A
- 📏 Cable Length: 5m/10m

Extension cable

3.5kW/ 7kW



- ⚡ Rated Power: AC250V
- 📏 Rated Current: 16A/32A
- 📏 Cable Length: 5m/10m

Charger Protective Case

standard



- ⚡ Product Dimension:
700*500*250mm
- 📏 Lock type:
3-Digit mechanical code lock
- 🔧 Installation: wall-mounted/ column

Charger Protective Case

upgraded



- ⚡ Product Dimension:
700*500*250mm
- 📏 Lock type:
4-Digit mechanical code lock
- 🔧 Installation: wall-mounted/ column

The background image shows a modern, two-story house at night. The house has large windows and a dark exterior. A car is parked in the driveway. In the top right corner, there is a large, stylized lightning bolt graphic. The text "HOME CHARGING SOLUTION" is centered in the middle of the image, flanked by two horizontal lines.

HOME CHARGING SOLUTION

Home Charging Solution

JOYCHARGE home charging service platform provide **one-stop solution** for individual car owners, OEMs, 4S stores, charging pile manufacturers. According to the differentiated replenishment scenarios of new energy vehicle owners, we have the ability to **customize products, develop platforms, and deploy servers individually**, and we are committed to making O&M services intelligent, digitalized, and cloud-connected. Current customers include FAW Volkswagen, SAIC Audi, BMW, GEELY, LINK&CO, etc.



Personalization

multiple production lines, self-developed products

01



After-sales

Automated dispatching of installation-orders, 365*24 hours real-time online customer service

02



Platform

Interconnection, multi-platform compatibility
Convenient operation on mobile, real-time monitoring of information

03



Butler Service

Point-to-point delivery, service visualization of the whole process
2 hours response
High quality service

04

Installation And Maintenance Management Platform

Engineer-side applets :

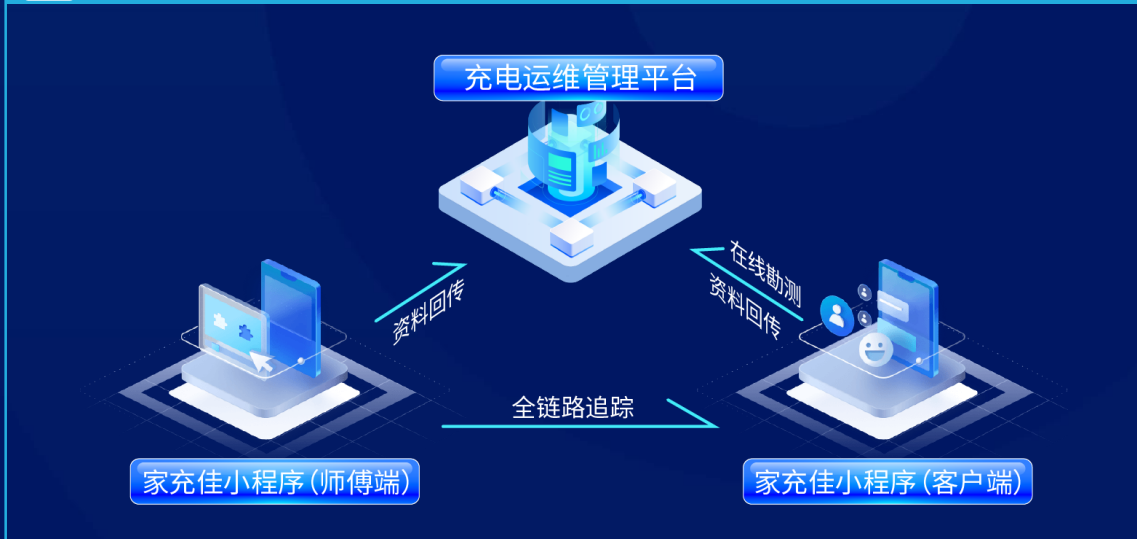
*Smart charging
integrated installation
and maintenance*



AFTERSALES Installation And Maintenance Management Platform



>>> Digital monitoring



🔧 Installation process



Charging Operation And Maintenance Management Platform

Man: Strengthen the Sense of Belonging of Installation Engineer; provide User-oriented, Localized service.

Machine: Real-time Order Installation Process Control, Data Traceability, Point-to-point Service, Overdue Warning, Process Datalization And Analysis Traceability.

Material: Real-time Inventory Info; Regular Meeting Among Factory And After-sales To Improve Product Quality And Operational Efficiency.

Method: Product Knowledge Training, Installation Standards, Skills, Common Problems Counseling, To Form WI And Strengthen Service Guarantee Mechanism.

Environment: Dress Code, Service Materials, Certificates, Installation Tools, Auxiliary Materials, Maintenance Process System, 400 And a Full Closed Loop Inspection.

<input type="checkbox"/>	行号	发货单号	下单时间	预计发货时间	实际发货时间	收货时间	商品名称	商品代码	供应商商品代码	客户	下单经销商	状态	物流公司
<input type="checkbox"/>	5751	DD202110290053	2021-10-29	2021-10-30	2021-11-02	2021-11-03	上汽大众7.2KW单相...	AP720002010002	840251			已收货	顺丰
<input type="checkbox"/>	5752	DD202110290054	2021-10-29	2021-10-30	2021-11-03	2021-11-04	上汽大众7.2KW单相...	AP720002010002	840251			已收货	顺丰
<input type="checkbox"/>	5753	DD202110290055	2021-10-29	2021-10-30	2021-11-03	2021-11-04	上汽大众7.2KW单相...	AP720002010002	840251			已收货	顺丰

 **MES
SYSTEM**

Wallbox SN  Box No.

 **WMS
SYSTEM**

Box No.  Delivery No.

 **JQCS
SYSTEM**

Installation No.  Delivery No.

 **JQCS
SYSTEM**

Wallbox SN  Installation No.

Set-up The Data Interface Of All Processes

- ◆ One-click order placement through the logistics company interface.
- ◆ Automatic receipt confirmation.
- ◆ All logistics process can be traced.

JIACHONGJIA Applet/App

For
customers



Binding



Real-time
Monitoring



Shared
charging



Timed
Charging



ONE cell phone, easy to complete a safe, professional and convenient home charging

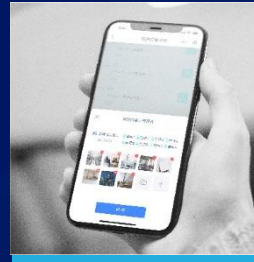
For
installers



Confirmation of
power conditions



Survey information
upload



Installation status
visualization



ME-center



Full-process visualization of installation

Mobile Applet/App to check operation & maintenance steps

Installation And Maintenance Service



👍 Benefit



620+
Cities



3200+
Technical staffs



Personalization
Meet the different needs of customers



Professional service
Real-time uploading of all information in installation process



Reservation Service
2 hours response



Full-region coverage
Service outlets throughout the country



Progress accessible
Real-time progress tracking
Visibility of services



Online Customer Service
365*24 hours customer service real-time online.
Match customers with optimal solutions

Case Introduction



Case Introduction



SVW

SVW-AUDI

FAW-VW

Huawei SERES

HONGQI EHS9

HOZON
NAUTO

GEELY

BMW
SHANGHAI
New local standard

CHANGAN

PLATFORM

Wallbox Management Platform,
Wallbox Networking
Aggregation Platform

SVW | SVW-AUDI | FAW-VW
FAW-AUDI | HONGQI | BMW
SHNLS

DEVELOPING

SVW | SVW-AUDI | FAW-VW
FAW-AUDI | ZHIJI | BMW
SHNLS
JIKE | HONGQI

Installation
management system

AFTERSALES

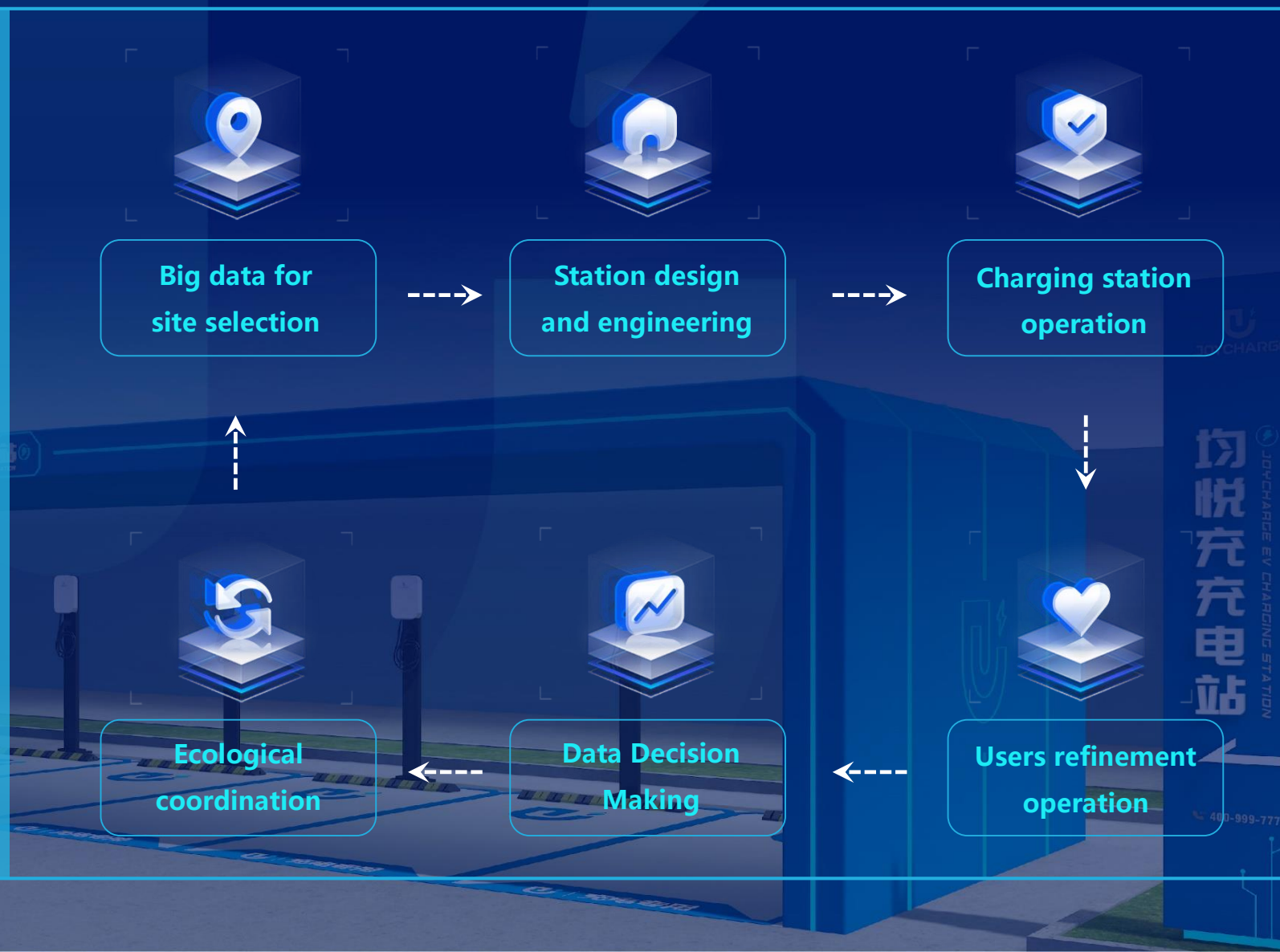
SVW | SVW-AUDI | FAW-VW
HONGQI | HONZO | GEELY | LINK&CO
GEOME | Huawei SERES



DESTINATION CHARGING SOLUTION

Destination Charging Solution

JOYCHARGE proposes destination charging solutions for destination scenarios such as neighborhoods, parks, office buildings, business districts, colleges and universities, and municipal institutions. Centered in Ningbo, the company has set up wholly-owned subsidiaries in East China, South China and other cities with high energy vehicle ownership and penetration rates. At present, the company has put into operation more than 814 charging stations covering Ningbo, Hangzhou, Wenzhou, Taizhou, Shanghai, Nanjing, Suzhou, Jiaxing, Wuxi, Guangzhou & Shenzhen etc. By 2023, it will put into operation more than 10,000 charging Wallbox to fill the gap of the last kilometer of the market.



Destination Charging Solution



Operation

Support remote 0 error fault diagnosis,
fault self-recovery
2-hour response



Platform

refined operation and management,
JOYCHARGE Applet+ charging station
management platform



SMART

Multiple start-up methods, multiple
collection channels
Support QR-CODE/card-swiping/plug-and
charging
OTA comprehensive upgrade, user
experience optimization



Infrastructure

OCPP2.0.1 + CLP 104 protocols
Multiple security measures
Micro-service architecture with 99.9% reliability
Supports interoperability between host plants
and municipal platforms.

Cooperation Mode

A

**JOYCHARGE leads
construction and operation**

B

**Real Estate Acceptance Mandatory
Supporting Installation**

C

**Third-party operators to
join or operate on behalf of**

D

**Third-party platform data
interconnection**

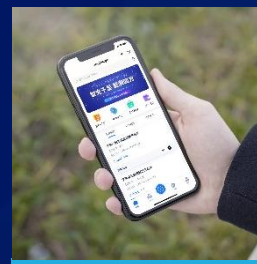


JOYCHARGE APPLLET/APP

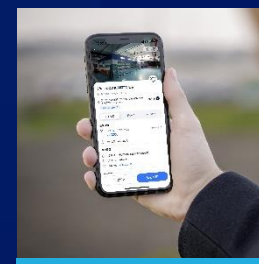
JOYCHARGE applet/APP is designed from the perspective of users, combines the industry pain points, takes the mobile terminal as the carrier, realizes the intelligent interaction with the charging station, one-click charging, improves the user's charging experience, and reduces the mileage anxiety. Users know the status of charging station in real time through the visualization interface, which improves the operation efficiency of charging facilities, ensures the stable operation of Wallbox, and realizes high-quality, high-efficiency and intelligent management of operation and maintenance of charging facilities.



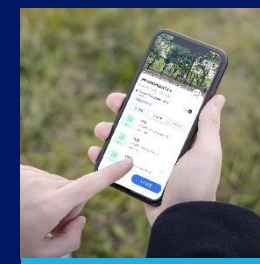
Registration



Precision Search



Charging

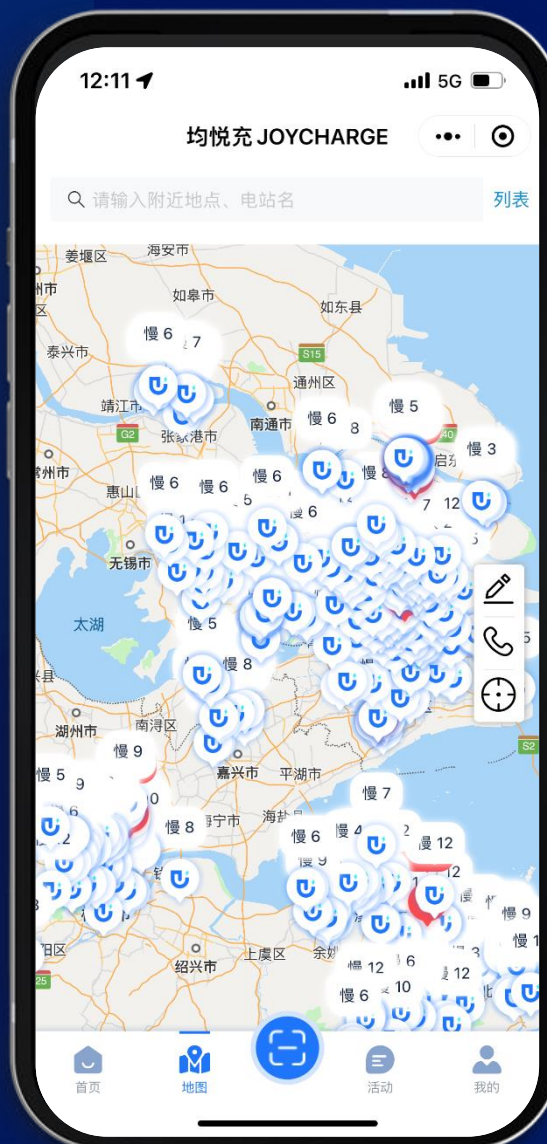


JOYCHARGE APPLLET/APP

APP Home Page



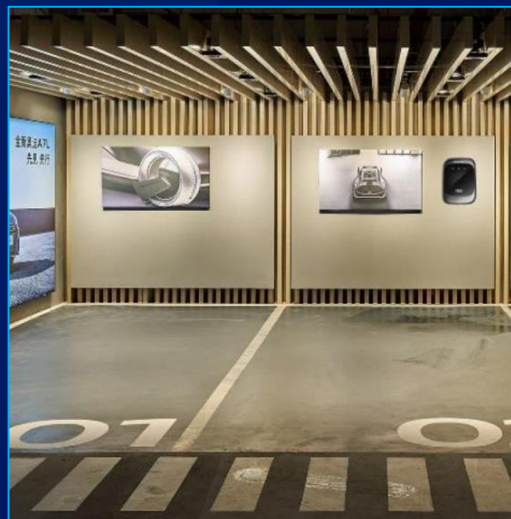
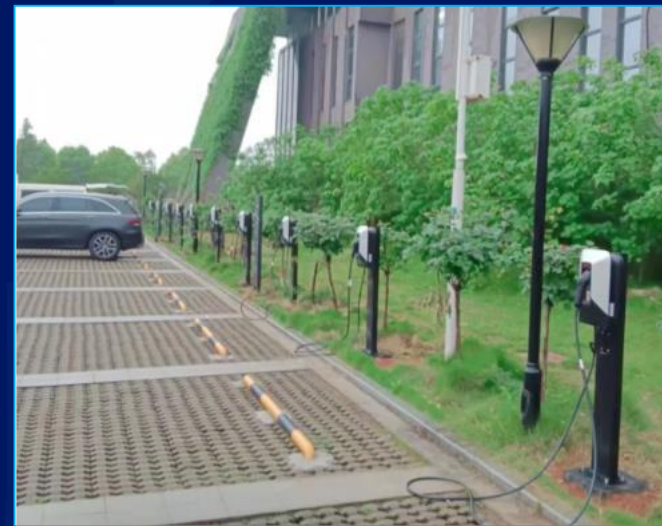
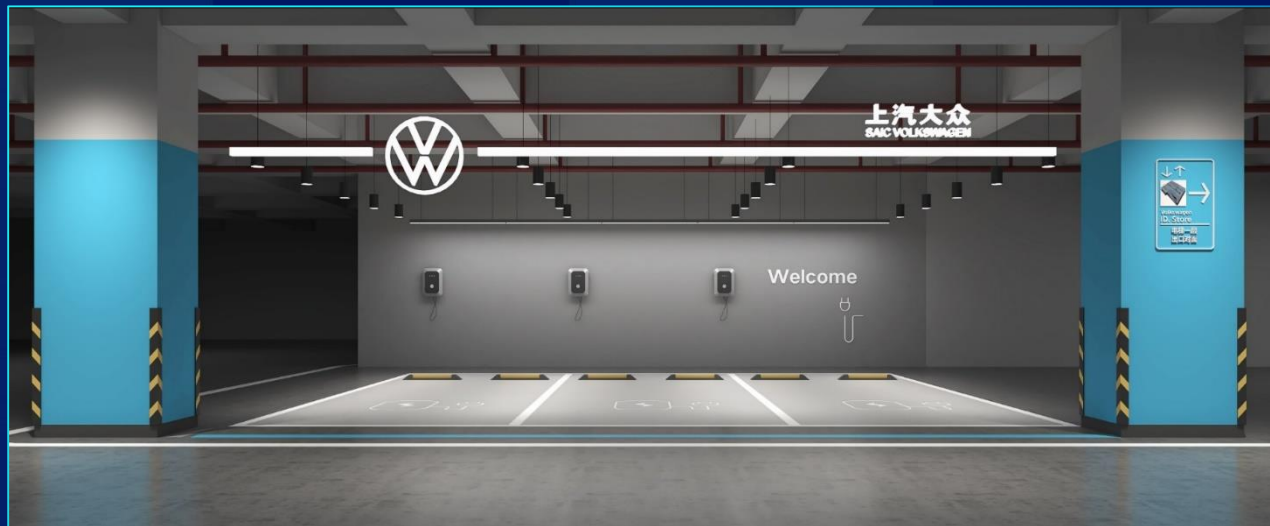
Charging Map



Detail Page



Case Introduction





ENERGY NETWORK

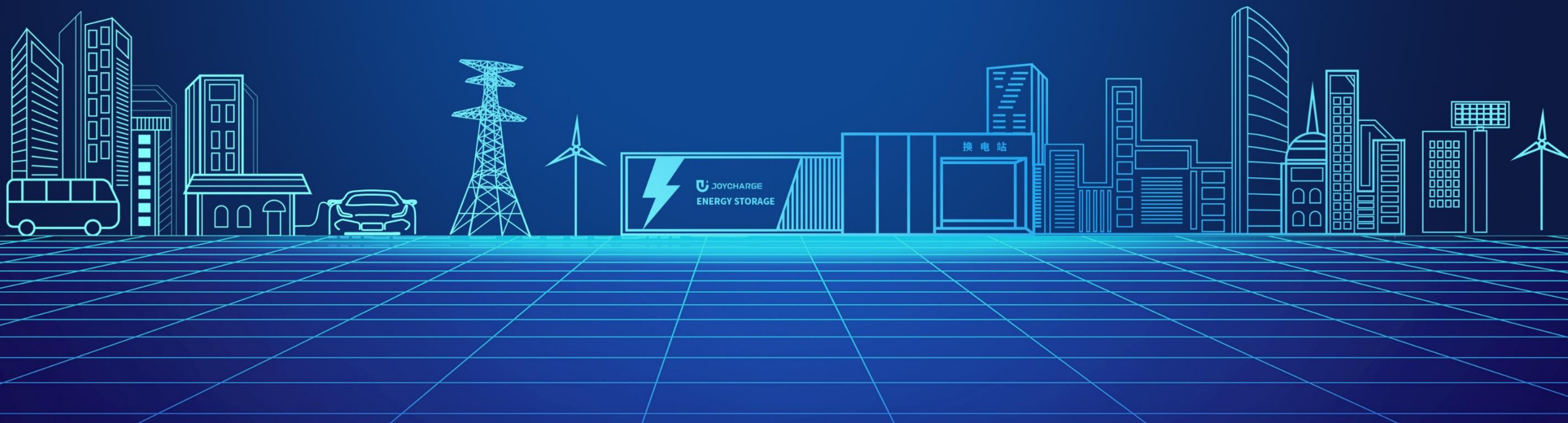
Energy Management Platform

The energy management platform is dedicated to new energy optical storage charging, distribution, switching and discharge services, providing intelligence, digitalization, cloud-based network connectivity, and carbon emission reduction data visualization.



02

AWARDS AND CERTIFICATIONS



AUTHENTICATION



COPYRIGHT & APPEARANCE PATENT



WIN AWARDS

GEELY
Star of Service



SVW
卓越质量奖



VOLVO
绿电奖



NIO
守望奖

质量卓越合作伙伴



FAW-VW
价值共创奖
卓越合作伙伴

GM
供应商接触质量奖
技术创领奖



中国电力企业联合会
会员单位



NINGBO BRAND
最佳新锐品牌

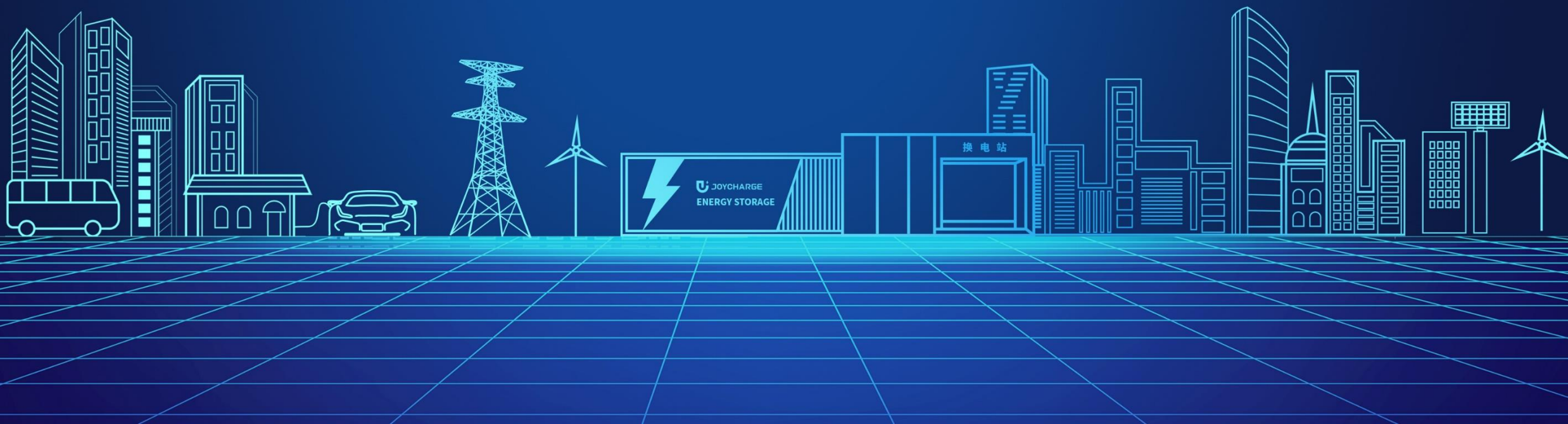


GEELY
优秀供应商



BBAC
杰出供应商奖

03 COOPERATIVE PARTNER





DAIMLER



广汽菲克
GAC FCA



LYNK & CO



BYD
比亚迪汽车



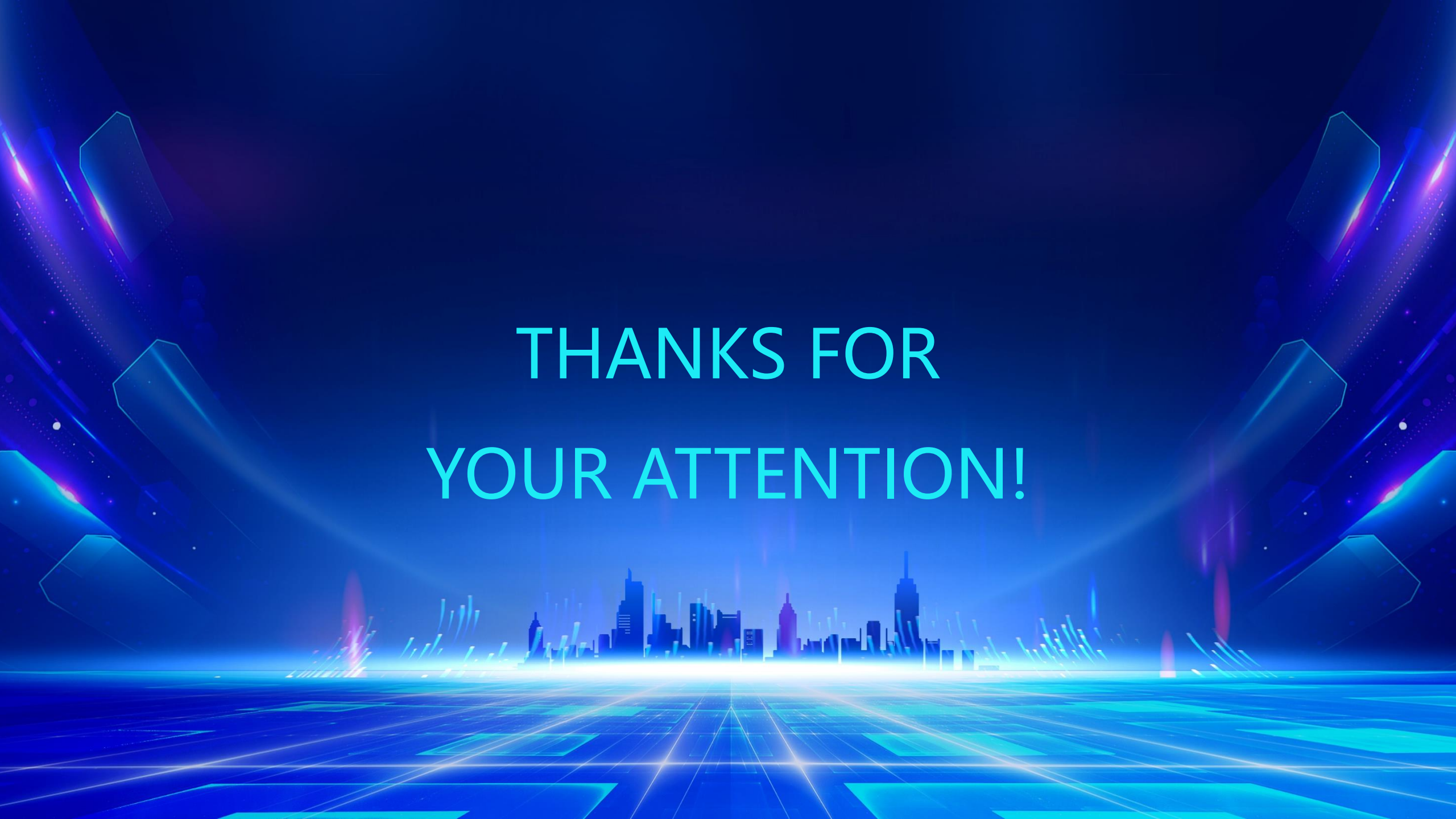
TOYOTA



Longfor
龙湖物业



THANKS FOR
YOUR ATTENTION!



智赢未来

JOYSONQUIN
AUTOMOTIVE SYSTEMS