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SHANXIANG

**BETTER CHARGER
BETTER LIFE**



About Us

Zhengzhou Shanxiang New Energy Technology Co., Ltd., a member enterprise of Jingyida, is specializing in battery charging and swapping solutions. Its core team has been accumulating expertise in this field for more than 10 years and has rich product R&D and cooperation experience. The R&D staff of the team has participated in the drafting and formulation of various national and industry charging standards and has obtained more than 100 related patents accumulatively. The products have served more than 100,000 new energy vehicles such as buses, coaches, medium and heavy-duty trucks, sanitation vehicles, logistics vehicles, mining trucks, etc.

Shanxiang New Energy is committed to providing customers with high-quality charging and battery swapping products and efficient operation solutions to assist in developing the new energy eco-system.

More than **10** years

Deeply explore the field of charging and battery swapping

More than **100** Patents

More than **100,000**

Product service new energy vehicles



Relying on the National Engineering Technology Research Center for Electric Bus Control and Safety, Shanxiang New Energy is capable of testing and verification of charging gun durability, charging pantograph reliability, power grid simulation, load impact, full-function automatic test of charging pile, comprehensive vibration test, pile alternating temperature humidity test, and testing of low air pressure, salt spray, shower etc. to meet the R&D testing needs of various charging products, ensuring product safety and reliability.

After-sales service

Provide all-round service and accessory solutions, to solve customers' worries and add value to customers

● Service advantages

Worry-free services supported by Jingyida service platform and numbers of special service stations

Adhere to the "customer-oriented" principle and provide preventive inspection and regular return visit services

● Service commitment

Quick response: respond quickly to service needs and provide solutions, realizing worry-free services

24-hour care: 24-hour monitoring platform, real-time reminder of device status, worry-free use

Professional training: A professional training team provides customers with training on installation, use, repair and maintenance, etc., so to ensure the worry-free operation.

Full life cycle services: Free technical support services are provided throughout the product full-life cycle to ensure operation and worry-free charging.



Technical strength

● Team members

The core technical members of the team are all from Jingyida New Energy Technology R&D Center. Relying on the overall R&D resources of the "Center", a scientific research team of 40 people was established, including 3 doctors and 20 masters. This team has 32 professional technicians, accounting for 80%. It has the R&D strength of plug-in charging equipment, conductive automatic charging system, wireless charging system and big data analysis platform. This team has professional and technical talents in the fields of vehicle engineering, mechanic-electronics, mechanical design, power electronics, computer science and technology, control engineering, intellectual property rights management, etc. It is able to meet the R&D needs of conductive and non-conductive charging technologies.

● Intellectual property rights

The team members have applied for 143 patents, in which 85 patents in charging technology have been authorized, including 21 invention patents and 8 software copyrights. They have participated in the formulation of a number of national standards.

Patent Certificates



Software copyright



● Applicable Standards

S/N	Standard No.	Standard Title
1	IEC EN 61851-1:2017	Electric Vehicle Conductive Charging System - Part 1: General Requirements
2	IEC EN 61851-23:2014	Electric Vehicle Conductive Charging System - Part 2: EMC Requirements for Off-board Electric Vehicle Supply Equipment
3	IEC EN 61851-24:2014	Electric Vehicle Conductive Charging System - Part 24: DC Charging Digital Communication between Electric Vehicle and Charger
4	IEC EN 62196-1:2014	Plugs, Socket-outlets, Vehicle Connectors and Vehicle Inlets - Electric Vehicle Conductive Charging - Part 1: General Requirements
5	IEC EN 62196-3	Plugs, Socket-outlets, Vehicle Connectors and Vehicle Inlets - Electric Vehicle Conductive Charging - Part 3:
6	DIN SPEC 70121:2014	Digital Communication Charging System Consisting of Electric Vehicle DC Charging System and Control System
7	DIN SPEC 70122:2018	Digital Communication Charging System Consisting of Electric Vehicle DC Charging System and Control System
8	IEC EN 61851-21-2:2018	Electric Vehicle Conductive Charging System - Part 21-2: Electromagnetic Compatibility Requirements for DC Electric Vehicle Charging Stations

● Test equipment

It has more than 37,000 square meters of pilot bases such as test centers, trial production workshops, charging workshops, commuter vehicle charging stations and autonomous driving vehicle charging stations, with a training site of more than 400 square meters. The testing and analysis instruments and equipment have a total value of more than RMB 30 million, including charger test system, wireless charging multi-axis mobile bench, high-power programmable DC source, AC source, power analyzer, oscilloscope, electronic load, water cooling unit, three-comprehensive test bench, DC-DC comprehensive test system, charging interface durability test system, VUT and other charging system R&D and test equipment.



Panorama of National Engineering Technology Center





The business is distributed in more than 30 countries and regions around the world, including Europe, Asia, America, Africa, Middle East and CIS.



Integrated DC Charger

Product Highlights

- High protection**
 More than 30 safety protection measures in four categories. It has an IP55 rating and is fully waterproof and dustproof.
- High reliability**
 The charging module features an independent air duct and glue-filling process, which can adapt to various complex environments with high reliability.
- Fast charging**
 With exclusive charging protocol, the maximum current can reach 500A for a vehicle with two charging plugs, which is 25% higher than the industry standard. The output voltage is 100V ~ 1000V, meeting the charging requirements of various models. The changing piles are not required to be changed when the voltage of the vehicle is upgraded to 1000V.
- Easy to use**
 It is of low-gravity knapsack design and easy to install; it features a high power density module, covering a small area, and is convenient for handling and loading.
- Maintainability**
 It has an adhesive filter screen, reducing 90% of daily maintenance workload.



Specifications and Parameters

Categories	Items	Data
Input	Type	3-phase 5-wire system
	Voltage	380V /480V±15%
	Frequency	50Hz ±10%
Output	Voltage	150-1000V
	Current	250A
	Power	320kW/240kW/160kW/120kW/80kW
Environment	IP	IP55
	Temperature	-30~+55°C
	Humidity	5-95%
	Altitude	≤2500m
	Noise	≤65dB
Safety	Cloud Platform	Fault early warning and advanced disposal; vehicle pile data intercommunication and two-way safety verification; analysis of charging history data and big data protection.
	Charging Station	Professional overall solutions are provided to reduce construction risks and improve construction speed.
	Complete Machine	Protections on battery voltage, overcurrent, over-temperature, reverse connection, reverse charge protection, input overvoltage, under-voltage, overcurrent, short circuit to ground, emergency shutdown, insulation alarm and fault state early warning.
	Parts	Charging connector temperature protection, module overheat protection, electronic locking protection, lightning protection, electric leakage protection, door opening protection.
Charger characteristics	Network	4G、wifi、LAN
	Touch screen	8 inches

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European standard integrated DC charger

Product Highlights

- Faster charging**
 The whole series of products are equipped with a 250A charging gun as standard, and the maximum charging current can reach 250A. The output range is 150V-1000V, covering all pure electric models.
- High safety**
 The whole series of products are equipped with more than 50 protection functions such as hardware protection, software protection, charging state monitoring and abnormal charging protection. The product has passed TUV safety certification.
- High adaptability**
 The anti-corrosion of the product meets the requirements of vehicle regulations: The enclosure has passed 840h neutral salt spray test and 800h aging test, and the protection grade of the product meets IP55.
- High reliability**
 The product has a design life of 15 years and an 8-year quality assurance capability; The product has passed TUV CE RED certification and national standard type inspection.



Specifications and Parameters

Categories	Items	Data
Input	Type	3P+N+PE
	Voltage	400Vac ±15%
	Frequency	50Hz/60Hz ±10%
Output	Voltage	150Vdc-1000Vdc
	Current	250Amax
	Power	180kW/160kW/150kW/120kW
	Type	CCS2 2
Environment	Temperature	-30°C~+55°C
	Humidity	0-95%
	Altitude	≤2500m
	Noise	≤65dB
Safety	Safety protection	Overcurrent, overvoltage, overtemperature, undervoltage, short circuit, reverse connection, grounding detection and insulation detection
	Leakage protection	Type A leakage protection
	Lightning protection	AC type
Remote	Network	4G, Ethernet
	Control	OCPP1.6

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Split DC charging stack

Product Highlights

- **Intelligent and efficient**
Matrix topology, flexible distribution and module call-in as required.
- **Flexible configuration**
It can meet the requirements of 480kW and 12 guns at most, and can be flexibly configured to meet the personalized needs of customers.
- **Fast charging**
With a wide voltage range and large current, it supports parallel charging with two guns to save charging time and improve operation efficiency.
- **Exquisite volume**
The terminal occupies a small area and saves site resources to the greatest extent.
- **Cloud control management**
Multiple management modes such as cloud management, remote management, remote diagnosis and remote OTA upgrade are supported to greatly improve the operation and management efficiency of charging stations.



Specifications and Parameters

Items	Data
Input voltage	304 ~ 465V
Input frequency	45 ~ 65Hz
Input power factor	≥0.99
Output voltage range	200 ~ 750V/200 ~ 1000V
Output current range	0 ~ 1454A (system)
Peak efficiency	≥95.5%
Operating temperature	-20 ~ +65°C(output derating above 50°C)
Operating humidity	5% ~ 95% (without condensation)
Altitude	≤2000m (derating necessary for altitude higher than 2000m)
Overall dimensions	Host: 1400x800x1800mm GBT terminal: 420x240x1600mm

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Overhead automatic charging system

Product Highlights

- **Quick charging**
It allows for fast charging at 1000A, which is more than 3 times faster than the charging speed of the charging gun.
- **Full automation**
One-button automatic charging, vehicle fault tolerance ±22cm.
- **High safety**
Personnel do not need to operate high-voltage components, and the strength of the framework structure can meet level 12 typhoon conditions.
- **"3D two-layer" charging safety protection system**
The leading "3D two-layer" protection system provides ultimate protection for charging safety in remote protection and local protection of automatic charging system, making charging safer.



Specifications and Parameters

Items	Overhead automatic charging system	Overhead automatic charging system
Rated output power	120kW/160kW	360kW/420kW/600kW
Input voltage	380V±15%	
Output voltage	200 ~ 750V	150 ~ 1000V
Output current	Max. 600 A	Max. 1000A
Initiation mode	One-key connection, automatic charging	
Automatic connection time	<10s	
Allowable deviation for stopping	±100mm	±200mm
Interface temperature control	Temperature rise < 80K	
Operating ambient temperature	-30 ~ 55°C	

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Wireless charging

Product Highlights

■ **Good convenience**

Charge immediately after stopping, without manually dragging cable and gun plugging.

■ **Good safety**

Avoid human contact with HV components.

■ **Long service life**

Charging over air, without mechanical wear and ablation of conductive connection;

■ **No need of canopies**

Sealed energy transmission mechanism allows for open-air charging in rainy and snowy weather.



Specifications and Parameters

Items	Wireless charging		
	3kW	11kW	30kW
Rated output power	3kW	11kW	30kW
Input voltage	AC200-240V	AC380V±15%	AC380V±15%
Output voltage	40-60V	300-550V	300-550V
Maximum output current	50A	30A	75A
Efficiency	75%	91%	91%
Launch plate size (mm)	234*154*65	850*600*65	1000*950*84
Launch plate weight (kg)	1.6	50	80
Receiving plate size (mm)	234*154*100	460*320*35	470*470*86
Receiving plate weight (kg)	2	15	32

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Intelligent current collection system

Product Highlights

■ **Safer**

Multi-level insulation and isolation design can ensure safety by avoiding electric shock of drivers and passengers;

■ **More reliable**

Off-grid alarm, automatic and rapid pole lowering and center returning are made to avoid collision with surrounding objects, which is safe and reliable;

■ **Multiple protection**

Multiple protections such as overload, short circuit, lightning protection and insulation detection are equipped for stronger safety;

■ **Higher adaptability**

The structural parts have strong environmental adaptability after 720h salt spray experiment;

■ **Higher stability**

Double spring structure is adopted and passed fatigue test, and it is durable and the vehicle has a higher running stability;

■ **Adaptive to multinational network**

It can meet the network height of 4-7m, and can adapt to the network height of many countries.

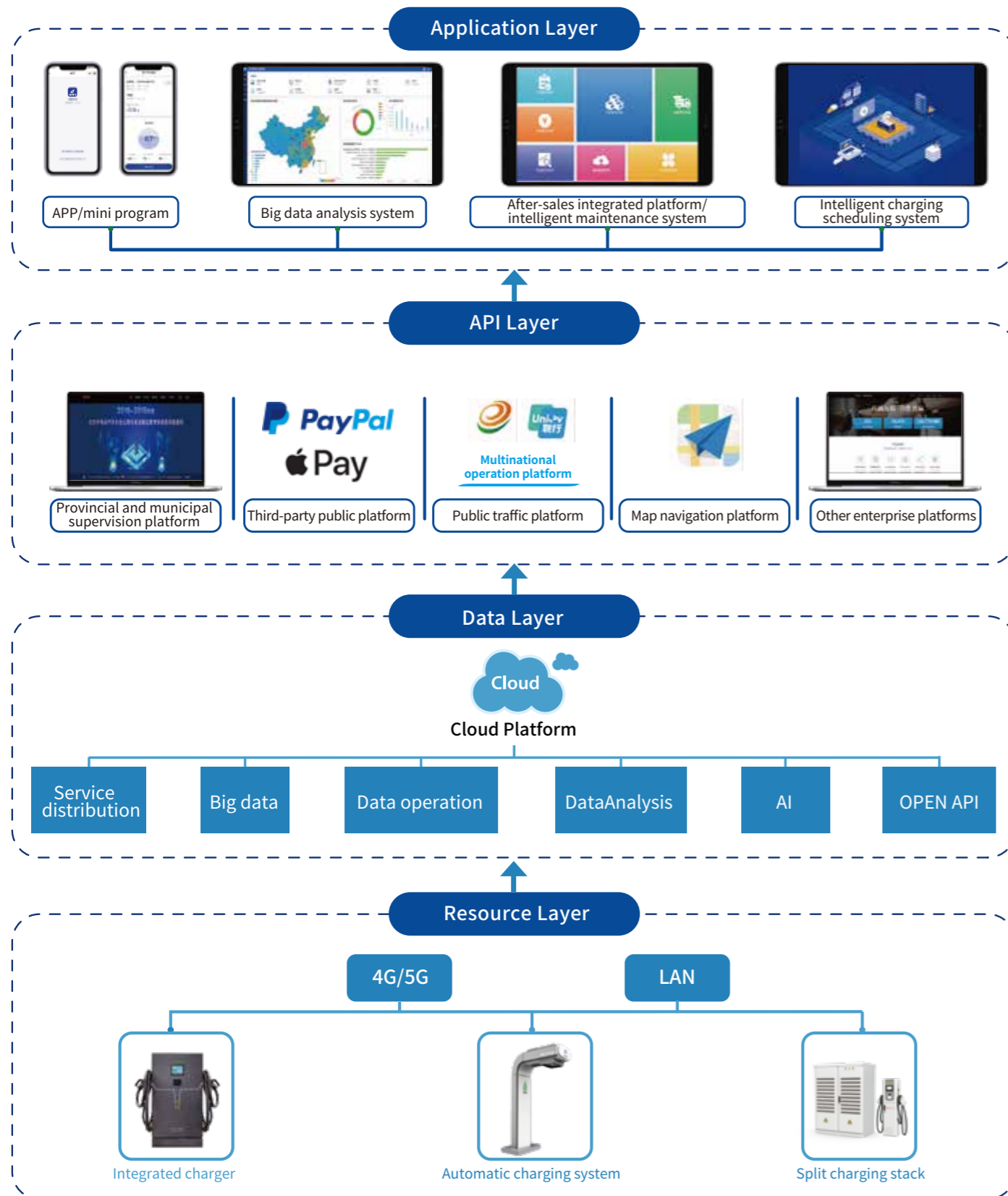


Specifications and Parameters

Items	Trolley pole
Rated voltage	750V
Rated current	150A/300A
Length of left and right extension of pole	4.5m
Adaptive network height	4 ~ 7m
Unsupported height	≤7m
Function	Lifting pole, emergency lowering pole, off-grid alarm, off-grid protection, automatic exhaust function and manual exhaust function
Protection function	Lightning, overload and short circuit protections, insulation detection

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SaaS platform



SaaS platform

● Excellent APP experience

Excellent user interaction experience and integrated big data analysis technology. New users can charge themselves by following the guide;

● Multiple user-type support

Personal accounts and enterprise accounts are supportable; enterprise accounts support binding of multiple personal accounts, whose charging can be settled together via enterprise accounts;

● Multiple station operation modes

Various operation modes such as franchise, agency operation and personal use;

● Multiple charging initiation modes

APP QR scanning, card swiping, scheduling, vehicle identification, etc.;

● Multiple charging modes

Intelligent charging, instant charging, fixed duration charging, pre-set time charging, etc.;

● Multiple settlement modes

Alipay, WeChat, UnionPay, coupons, vouchers and other payment methods;

● Flexible billing strategy

Charging can be billed differently according to charging station, time, operation type, terminal type, customer group and charging initiation modes;

● Big data analysis capability

Through big data analysis technology, the product provides data prediction and analysis services for the operation and maintenance of charging facilities, improving equipment profitability and reducing operation and maintenance costs;

● Interconnectivity

Data interconnectivity is established between the government supervision platform, company platform and industry-related platform.