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Instruction Manual

Preface

EDW series intelligent DC charging station is a kind of electric device that adopts professional power technology to provide efficient, safe and stable DC power for electric vehicles, and provides a friendly man-machine operation interface with corresponding control, billing, communication and safety protection functions. It can be connected to the background server, perfectly compatible with the OCPP standard protocol to achieve convenient functions such as mobile phone APP control, charging time scheduling and online payment, etc. Diversified communication methods are available for your taking option from Ethernet, WIFI or 3/4G.

We sincerely hope that this product can meet the users' requirements, and look forward to the comments on the performance and function of the product. We will continue to improve the quality of our products and our service.

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1.Safety Precautions

- Before using this product, be sure to read this specification carefully, and operate in strict accordance with the steps in this specification;
- If the product fault light is on or any fault message is displayed on the screen, please do not charge or stop charging, refer to the solutions in this specification for troubleshooting or contact the device manufacturer for handling;
- Do not put flammable, explosive, combustible objects, chemicals and other dangerous objects near the charging station;
- It is strictly forbidden to insert and pull out the charging gun during the charging process, and it is strictly forbidden to touch the inside of the charging gun to prevent the danger of electric shock;
- It is strictly forbidden to touch the charging plug or the charging socket of the electric vehicle, keep the charging plug in a dry state, and do not touch the charging plug with water on the hands;
- If there is any abnormal situation during use, please press the emergency stop button immediately;
- Do not attempt to disassemble, repair, or refit the charging station. Improper operation may cause damage, water leakage, electricity leakage, etc.;
- Please do not disassemble and repair the product alone when the charging station fails, please contact professional after-sales personnel to deal with it;
- During rainy and thunder day, please charge with caution; if there is water at the bottom of the device or inside the charging gun, please do not charge until the water is drained;
- Do not let children approach, touch or use the charging station to avoid personal injury;
- During the charging process, the vehicle is prohibited from driving.

2. Product Overview

2.1Product Brief Information

This charging station is designed for wall-mounted installation, greatly reducing the space it occupies. It features a simple and elegant appearance, a stable frame, and comprehensive protection functions. The product can be equipped with a charging pedestal and is suitable for various types of charging locations. There are multiple DC charging interfaces to choose from, including CCS2, CCS1, CHAdeMO, and GB/T.

2.2 Packing List

No.	Item	Qty	Unit	Note
1	Charging station	1	Set	
2	Instruction Manual	1	PC	
3	Backplane for the charging station	1	PC	
4	M10 Expansion bolt	6	PC	
5	Column for installed on the ground	1	PC	Not- standard parts
6	RFID Card	10	PC	
7	Card reader with SD card	1	PC	

2.3 Product Feature

Main Feature

- Ingenious structure design: with swinging door design, the charging station can be installed against the wall, making reasonable use of space in various installation scenarios, and also bringing convenience for future maintenance ;
- High industrial-grade standard: with redundant design of key components, waterproof and dustproof grade up to IP55 ;
- Modular design: each functional component of the product adopts modular design to bring convenience for maintenance and overhaul;
- High module utilization rate: the charging station strictly controls the output power according to the power curve of different types of modules. While making full use of the output capability of each module, it also avoids overclocking the output of the module and achieves the maximum utilization rate of the whole charging station;
- Industrial-grade display screen: 10.1" LCD touch screen with high-definition display it can automatically sleep in the standby state, which not only reduces energy consumption, but also prolongs the life cycle;
- Wide applicability: applicable to various types of charging places such as bus charging stations, parking lots, and residential quarters, etc;
- Low power consumption: The charging station adopts a low power consumption design, and some modules have the sleep function which can reduce power consumption in standby state.



Protection Mechanism

- It has a perfect charging protection function to prevent overcharging the vehicle;
- It has protection mechanisms such as phase loss, lightning protection, abnormal grounding protection, short circuit, over current, over temperature, insulation fault, and reverse battery connection, etc;
- With overvoltage protection, undervoltage protection, abnormal connection detection, emergency shutdown, communication fault prompt and other protection functions;
- With insulation detection function. It's prohibited to charge when the insulation performance decreases to ensure safety.

Diversified Configuration

- Modular design: compatible with different charging modules and applicable to different levels of voltage and current, all protection functions can be switched on and off independently
- Flexible charging mode: available in the mode of time, amount, power, automatic charging, reservation, etc.;
- Various methods of starting charging: available in the method of offline card charging, online card charging, scanning code charging and password charging, etc;
- Diversified communication method: available in Ethernet, WIFI or 3/4G.

2.4 Technical Parameter

Specification				
Model				
Electrical Properties				
AC Input	Input Rating	AC400V(±10%) 3ph	AC400V(±10%) 3ph	AC400V(±10%) 3ph
	AC Input Connection	3P+N+PE	3P+N+PE	3P+N+PE
	Rate Input Current	3Φ33A	3Φ50A	3Φ66A
	Frequency	50/60Hz	50/60Hz	50/60Hz
	Power Factor	≥0.99	≥0.99	≥0.99
	Efficiency	≥95%	≥95%	≥95%
DC Output	Output Voltage Range	200V-1000V	200V-1000V	200V-1000V
	Max.Output Current	66A	80A	133A
	Max.Output Power	DC20kW	DC30kW	DC40kW
	Voltage Accuracy	≤±0.5%	≤±0.5%	≤±0.5%
	Current Accuracy	≤±1%	≤±1%	≤±1%
User Interface & Control				
Display		10.1" touch screen		
Screen Material		LCD		
Push Buttons		Operation buttons/Emergency buttons		
User Authentication		RFID,OCPP,QR code,Password,Application		
Support language		English (Other languages available upon request)		
Communication				
External		Ethernet,WIFI		
Internal		CAN,RS485,RS232		
Environmental				
Operating Temperature		-30℃ ~ +50℃		
Humidity		<95% relative humidity, non-condensing		
Altitude		≤2000m(6000 feet)		
Mechanical				
Ingress protection		IP55		
Enclosure Protection		IK10		
Cooling		Air forced		
Installation Method		Wall-mount / Stand-pile		
Protection				
Protection		Over current, Under voltage, Over voltage, Residual current, Surge protection, Short circuit, Over temperature, Ground fault		
Regulation				
Certificate		CE		
Standard		EN IEC-61851-1:2019; EN61851-23:2014; EN 61851-24:2014; EN IEC 61851-21-2:2021		
Optional Config				
Network Gateway		4G		

3. Charging Module Address Code Setting

Each charging module has the unique address code. The address code must be strictly set based on the specification or the charging station cannot run normally. **Under normal circumstance, the address code is set in advance.**

3.1 Module Guidance

The module voltage, current, fault code, address, group number, communication protocol, operation mode and other information can be displayed. If the key is not operated for more than one minute, the output voltage of the rectifier module will be displayed automatically. At this time, if there is an alarm, the fault code information will be displayed. The voltage display accuracy is $\pm 2V$, and the current display accuracy is $\pm 0.2A$.

The module protection/alarm information was displayed on the LED in real time in the form of fault code. The fault code is shown in the following table:

Fault code	Code meaning
E00	OK
E01	Output under-voltage
E02	Module ring temperature and internal Temperature over or under temperature
E03	AC input over-voltage or under-voltage
E06	Output over-voltage
E07	Serial number repeat
E08	Fan fault
E14	Relief valve fault
E15	PFC voltage unbalance warning
E16	Abnormal output
E17	Emergency stop
E18	Short circuit

3.2 Module Indicator Instruction

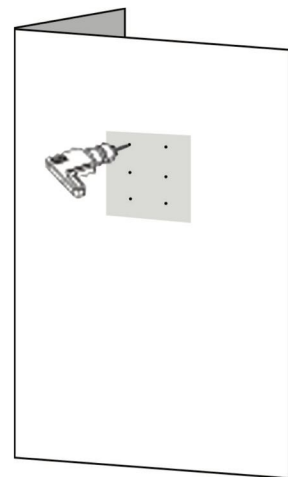
The LED lights in three colors are used to display the working status of the module. Corresponding status of the module shown as below:

LEDindicator light	Module Status	LEDStatus	Description
Green	Power indicator	on	Normal charging status
		flash	Communication with monitoring or background; monitoring or background placed the DCDC shut order
Yellow	Safety indicator	on	Power Derating due to input AC voltage phase failure and temperature; Serial number repeat
		off	Normal charging in Automatic mode
		flash	Normal charging in manual mode
Red	Fault indicator	on	EEPROM fault; Fan drive fault; AC input over-voltage or under-voltage; AC input under-phase; Internal over temperature; Abnormal communication between primary side and secondary side; AC output over-voltage or under-voltage; AC over-voltage disconnection;
		off	OK
		flash	Fan does not work

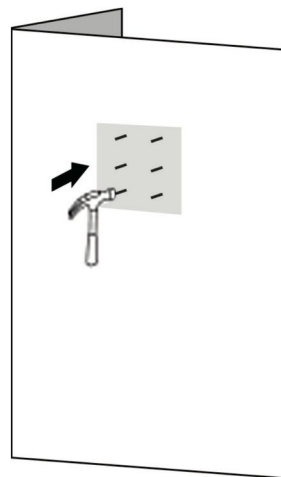
4. Installation

The diagram only shows the installation method of the wall-mounted charger with single charging port. The installation method is same for the wall-mounted charger with dual charging ports.

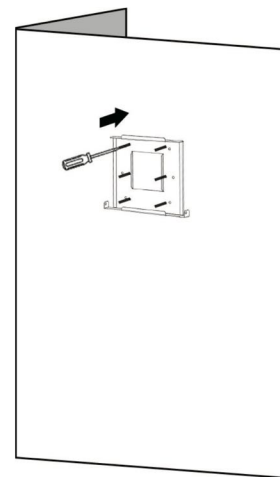
4.1 Wall Mounted Installation



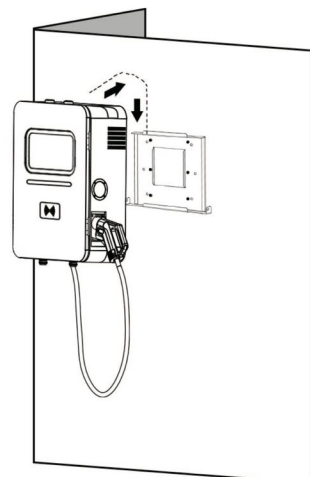
1. Select the appropriate installation position and punch the screw hole position according to the mounting plate mark.



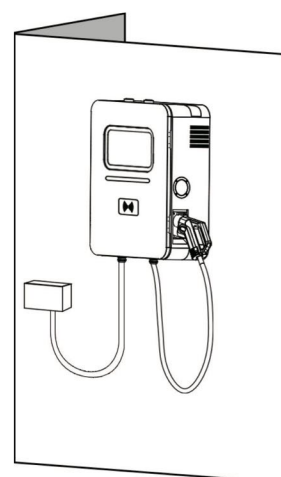
2. Knock the expansion pipe into the hole



3. Use M10/M12 bolts to horizontally fix the mounting plate to the wall.

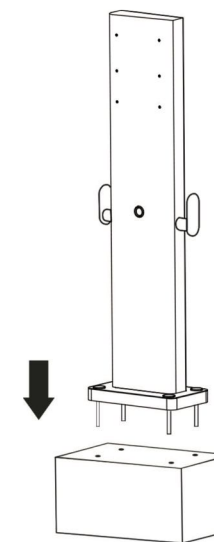


4. Hang the charger on the mounting plate.

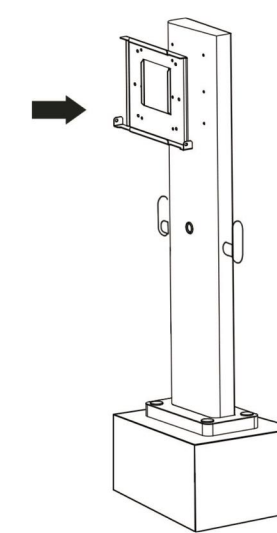


5. After installation, connect the incoming line (3 * 16mm² + 2 * 10mm²) to the power supply.

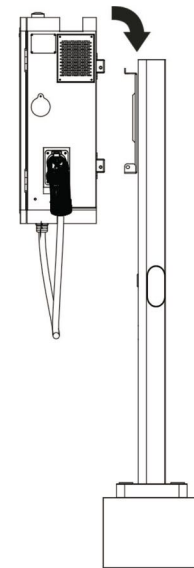
4.2 Column Installation



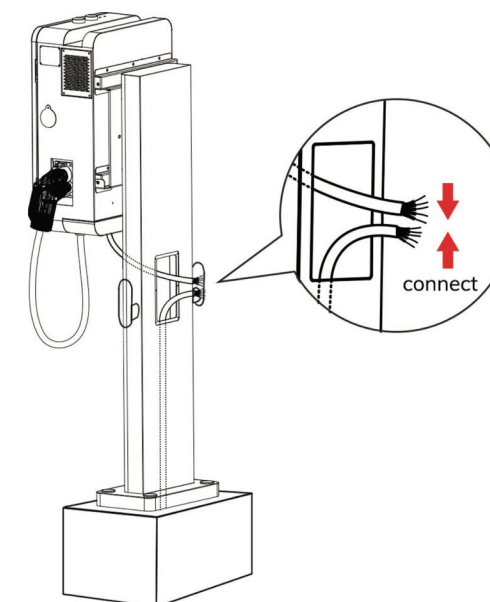
1. Install the column in place



2. Use M10/M12 bolts to fix the mounting plate on the column (holes are reserved on the column).



3. Hang the charger on the mounting plate.



4. After installation, connect the incoming line (3 * 16mm² + 2 * 10mm²) to the power supply.

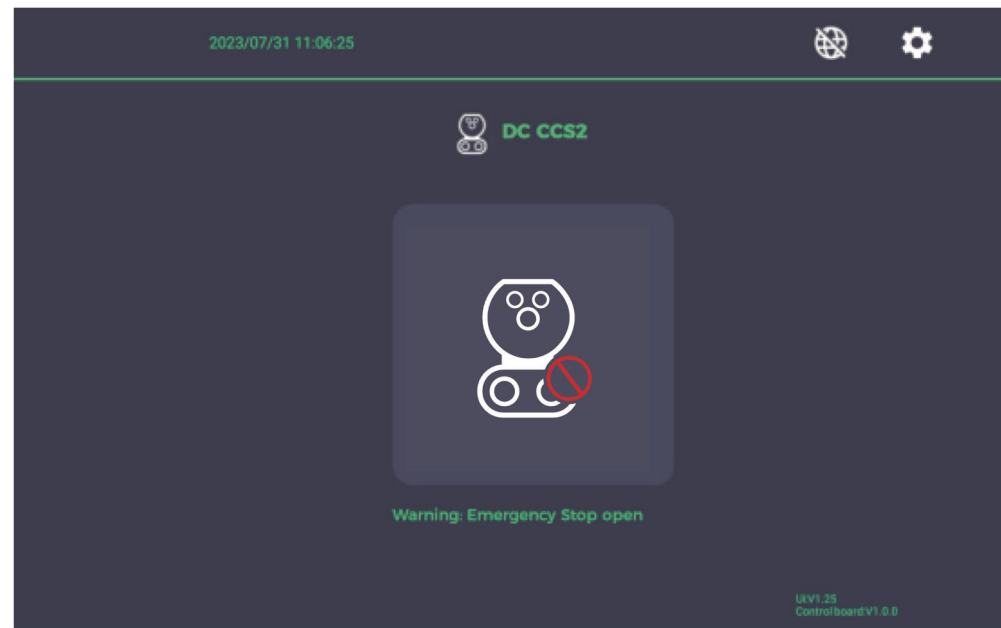


5. Operating Guidance

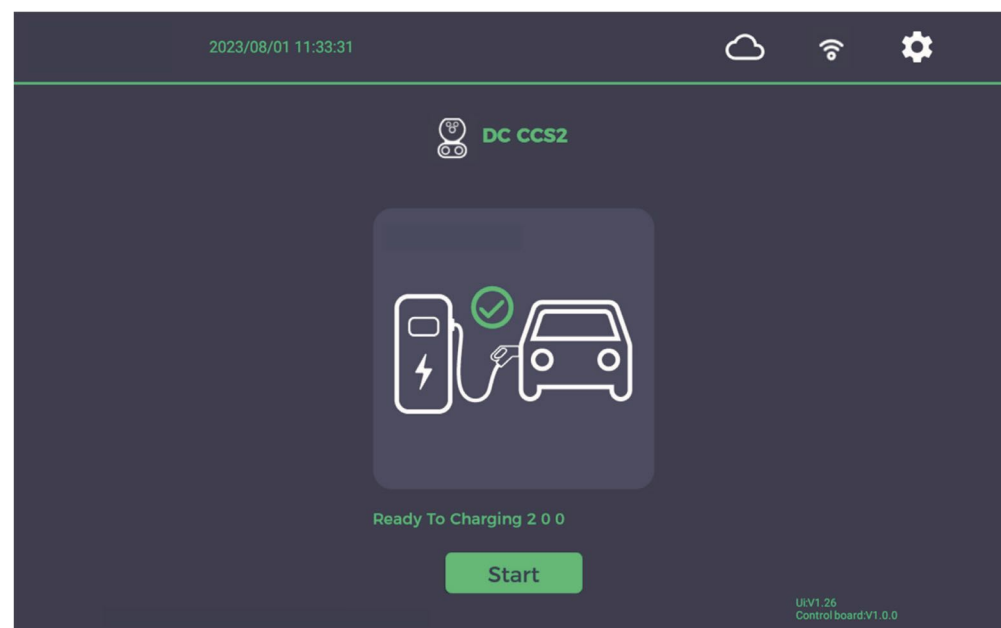
5.1 Operating Procedure

The diagram only shows the operation interface of CCS2 connector. The operation procedure is same for other types of connector.

1. After powering on, please check if the communication is normal and whether pressing the emergency stop button displays as follows. If the emergency stop status is not shown, it indicates a communication abnormality between the screen and the main control board. Please contact technical support for assistance.

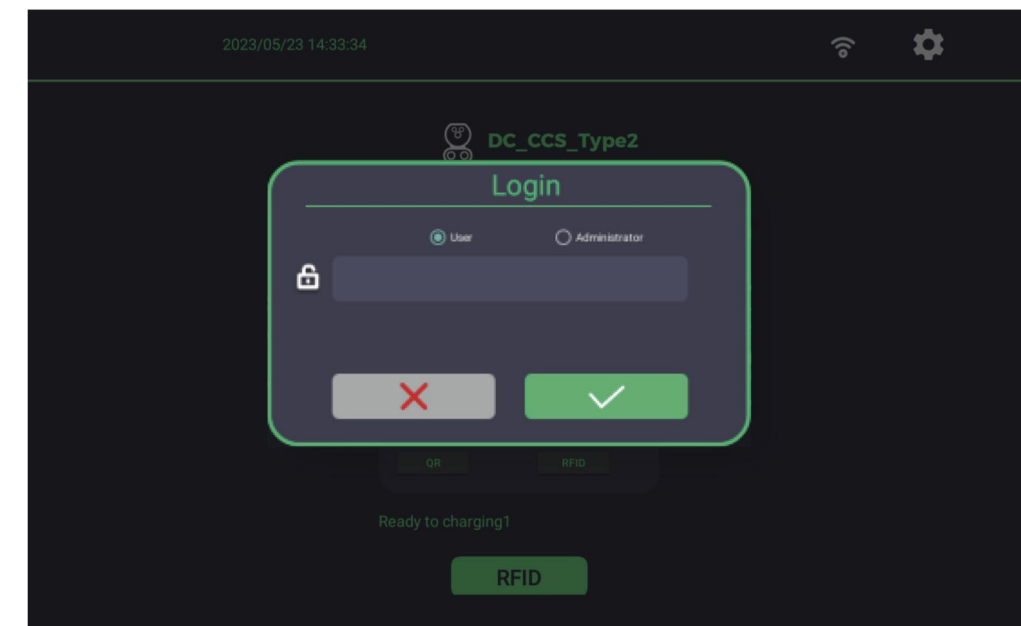


2. By default, the charging mode is set to RFID mode, as shown in the following figure. Click the "Start Charging" button to display the card swiping interface, which can only be activated by swiping the card. (Before starting card swiping, the charging station needs to be connected to the Teison platform.)

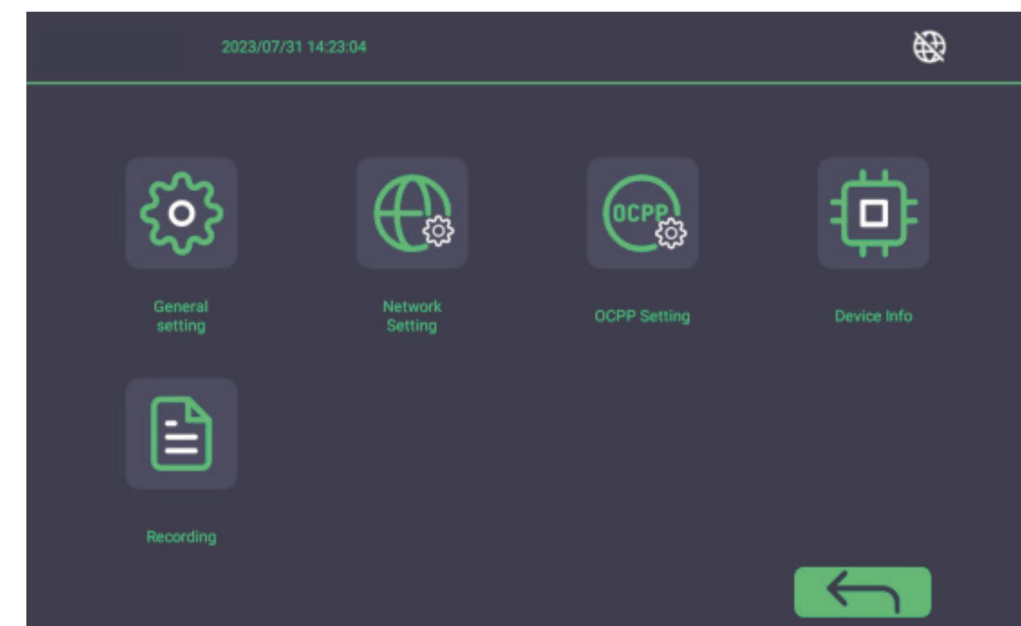


leading the charge

3. To change the charging mode, you need to access the settings interface. The user password for the settings interface is initially set to 'No Password'.



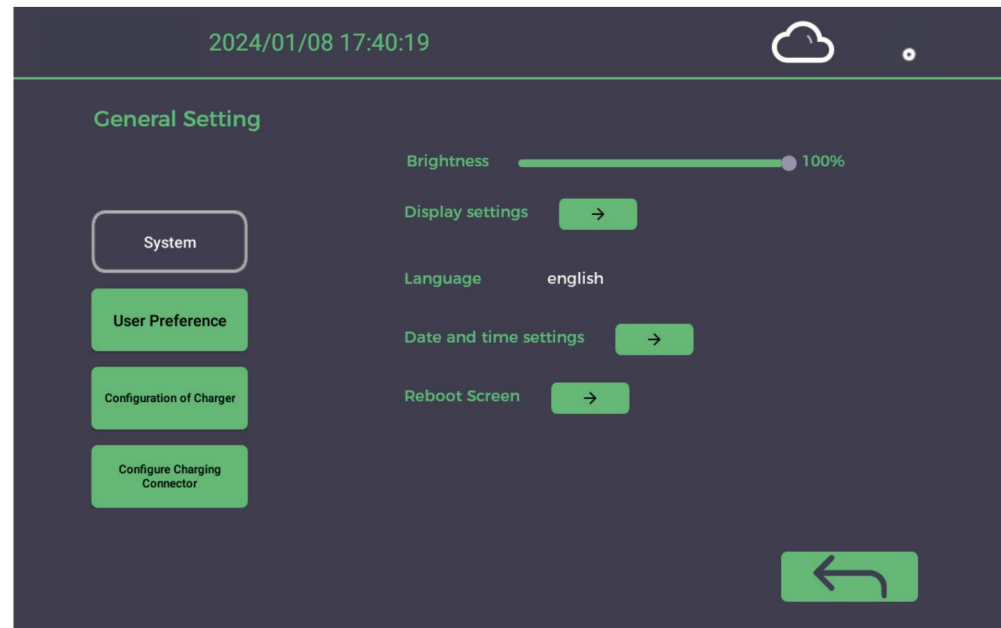
4. The settings accessible to the user include General Settings, Network Settings, OCPP Settings, Device Information, and Records.



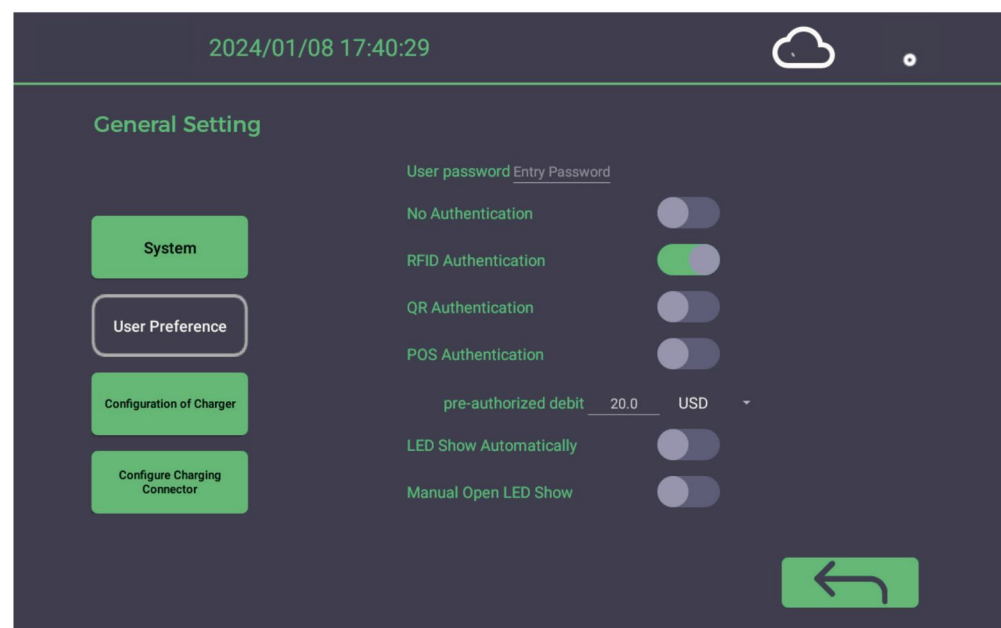


5. General Settings are divided into System Settings, User Preferences, Charging Station Configuration, and Charging connector Configuration.

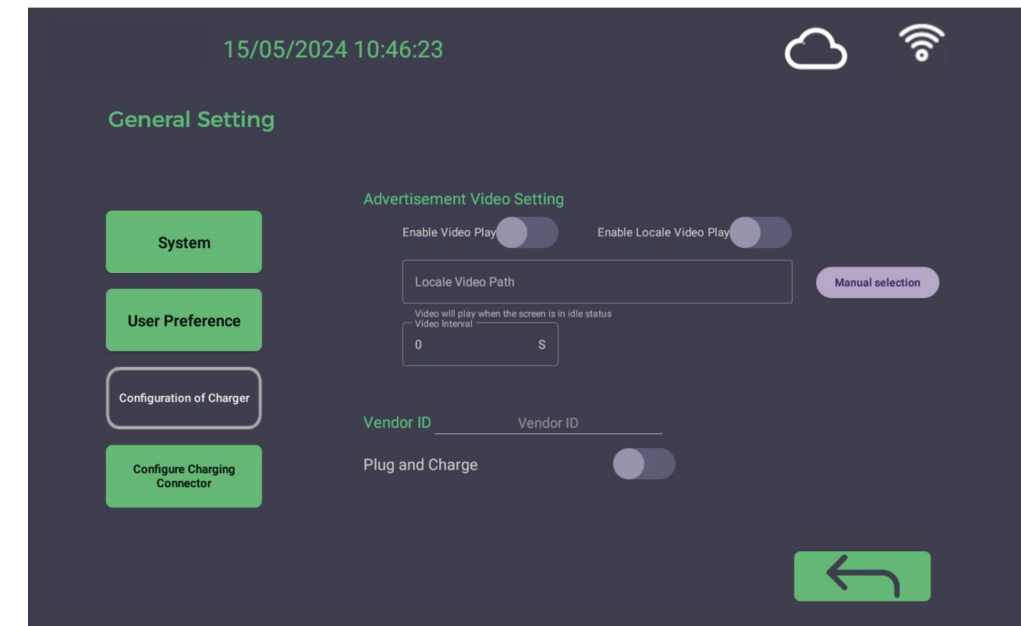
System settings include brightness adjustment, full screen display, language configuration, time zone setting, and screen restart. As shown in the following figure.



- User preferences include password settings and four charging modes (with POS machines being a non-standard option). After enabling anonymous charging, other charging modes will not be available. Models that support POS machines will have POS machine authentication options. When using a POS machine, it is necessary to authorize a debit of a specified amount in advance. The LED strip setting function is only available on models with customized strip functions. This option is not displayed on regular models.



- The charging station configuration includes "advertising playback" and "plug and charge" functions (plug and charge function is a customized function).



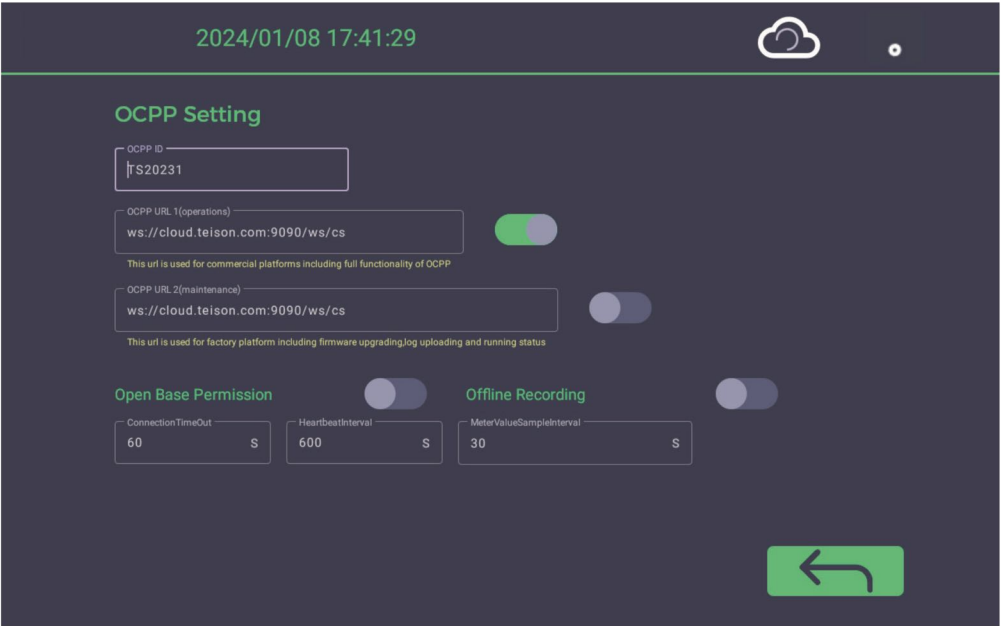
- A. The "advertisement playback" function requires:
 - (1) . Activate the local playback button
 - (2) . Import the video that needs to be played
 - (3) . Set the playback path
 - (4) . Set the idle time to start playingB. Plug and play is a custom feature that regular products do not support. (Need to upgrade the main control board program implementation)



Charging connector Configuration allows you to set the maximum power, maximum voltage, minimum voltage, QR code, whether to enable Base64 encoding for QR code, and the billing price per kWh.

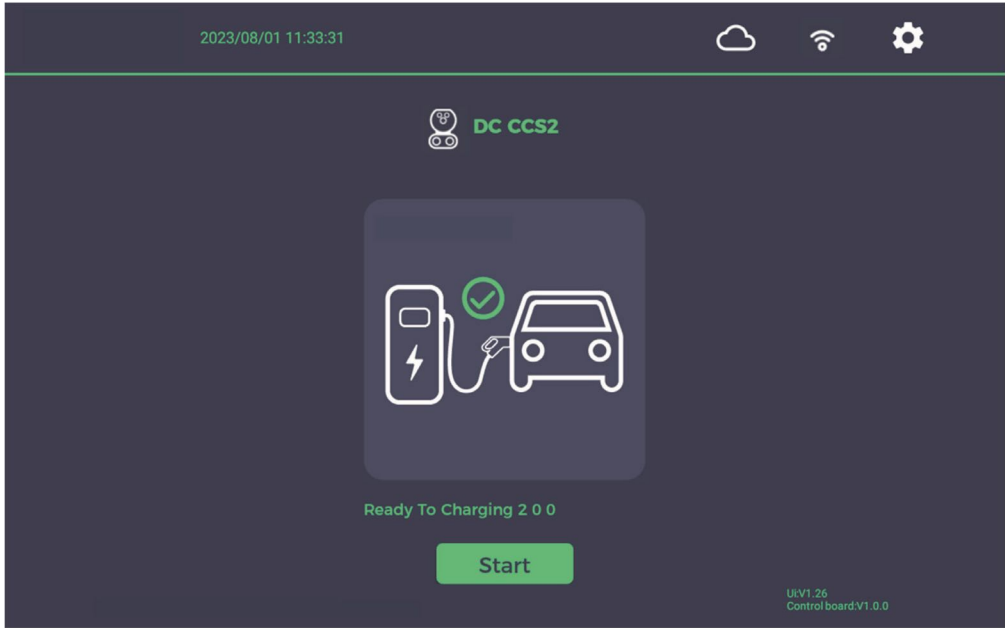


6. OCPP settings include: charging station ID number, UL1 OCPP platform connection address, UL2 OCPP platform connection address, basic identity verification, and offline recording function.

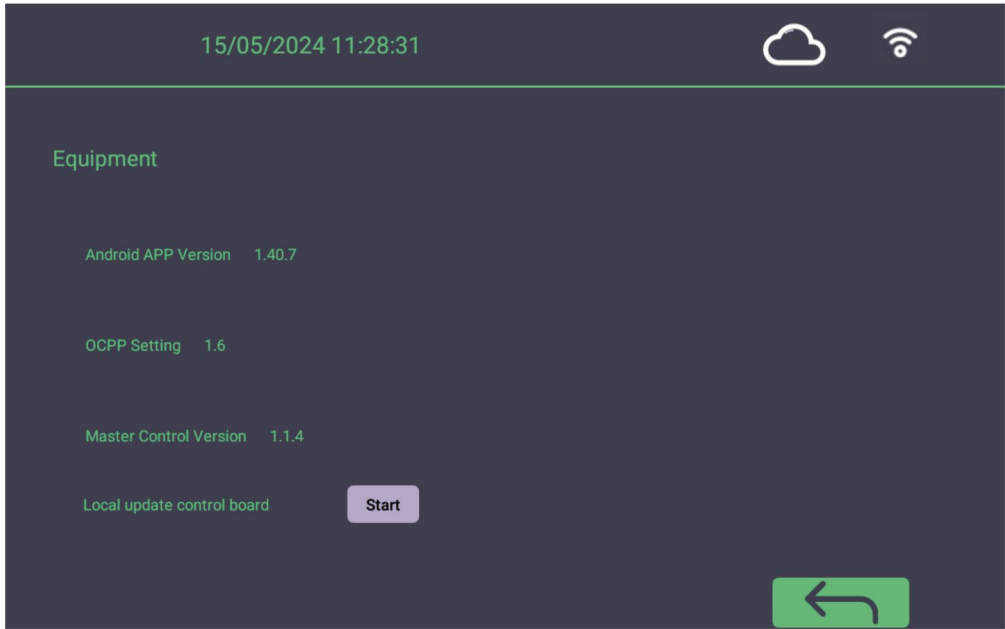


A.Cloud platform connection supports dual platform simultaneous connection. UL1 has functions such as remote control of charging stations, access to charging logs, charging data, charging status, and remote firmware upgrades; UL2 only supports remote firmware upgrade, access to charging logs, and access to charging status. (UL2 connection platform function, UL1 platform must be turned on to work)

B.After completing the settings, click the OCPP Start Button. Return to the main interface to check whether there is a cloud icon displayed.If UL1 and UL2 are successfully connected, two clouds will appear



7. Device information: Display Android UI firmware version, OCPP protocol version, main control board version, and local firmware upgrade.

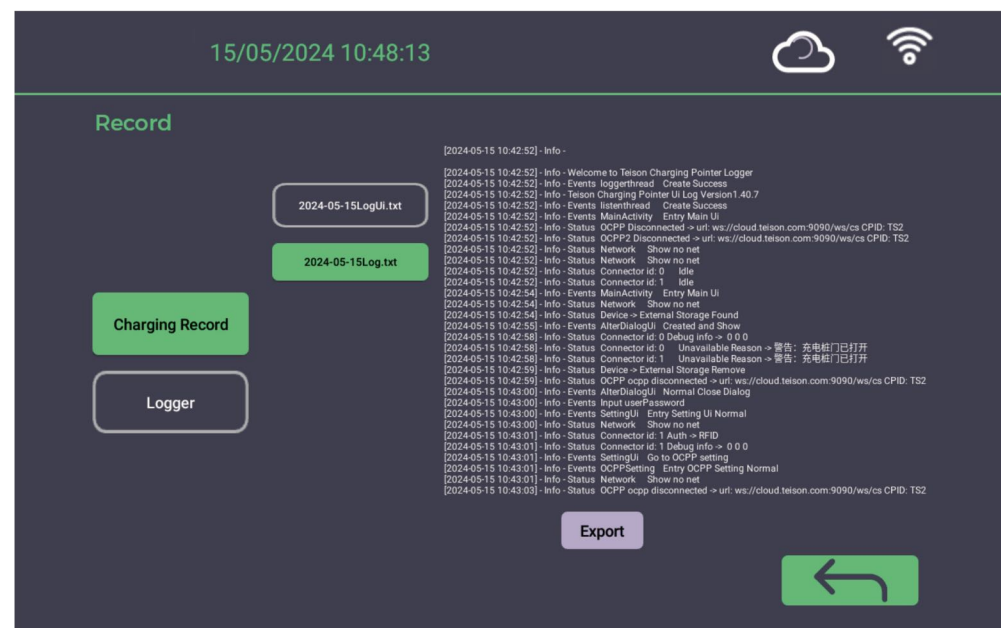
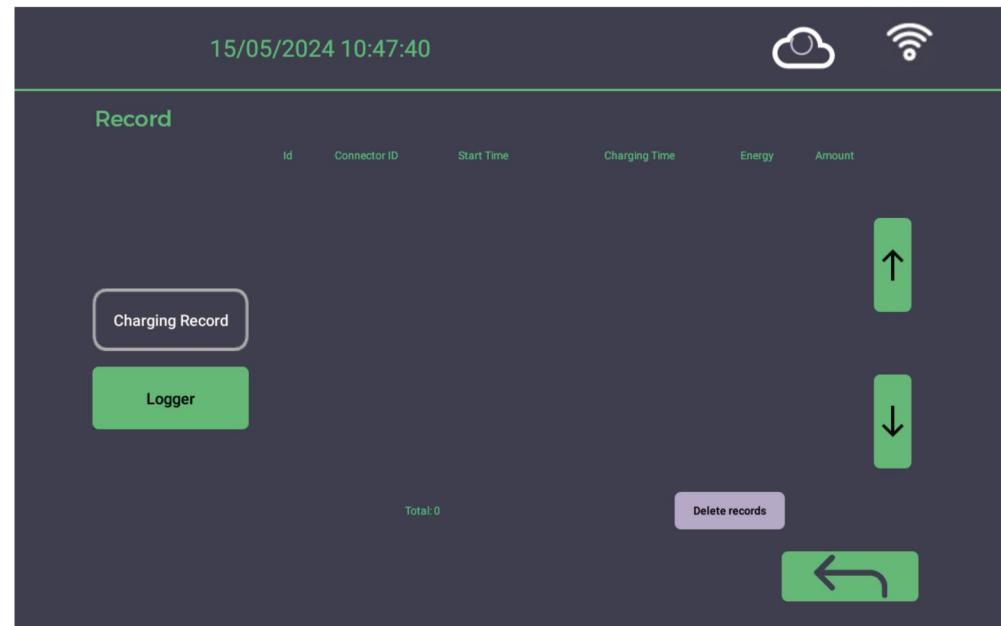




8. Charging records: The device stores charging records and logs

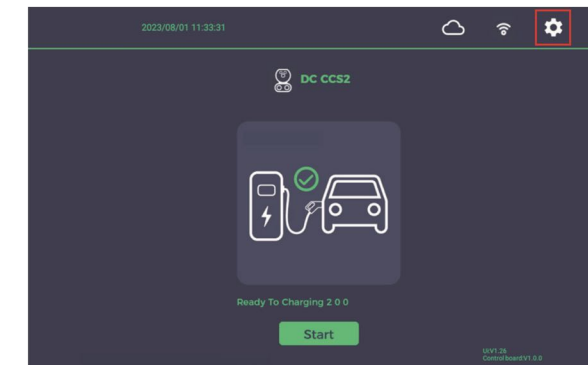
A. Support querying the charging date, charging time, charging power, and charging amount for each order.

B. Support querying charging logs for charging stations and exporting them locally using a USB drive.

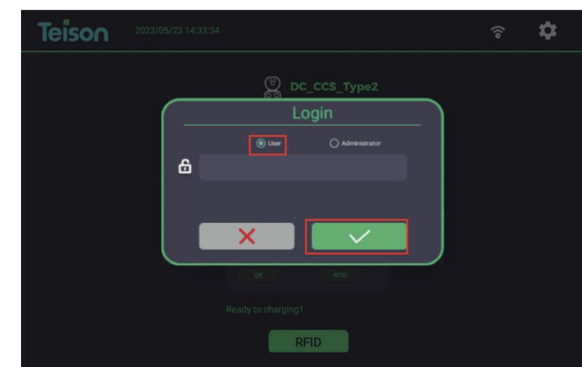


5.2 POSmachine usage guide (optional)

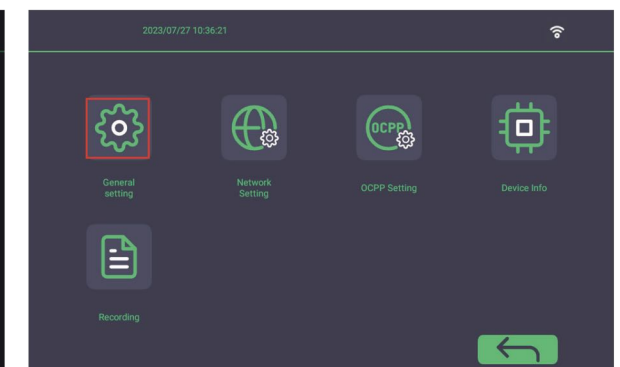
5.2.1 Set up POS payment



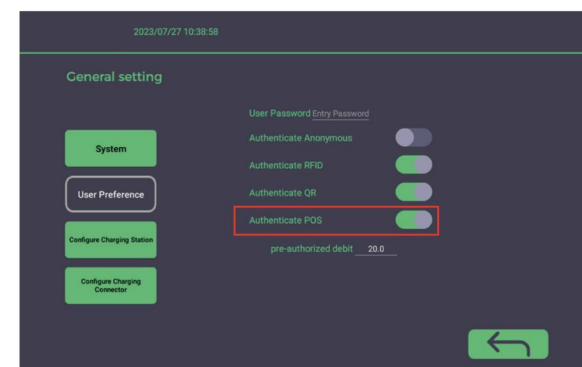
Click on the "⚙️" button in the upper right corner of the screen



Select the "User" identity, and directly click login without password to enter



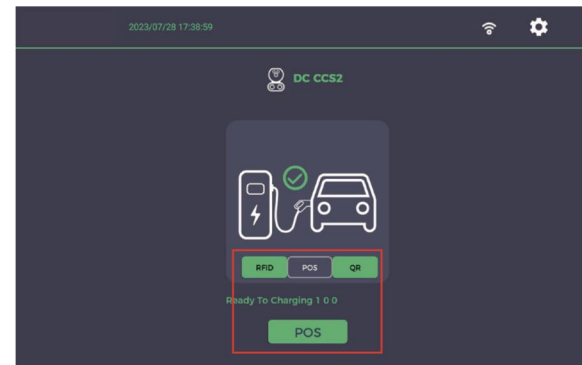
Click on "General Settings"



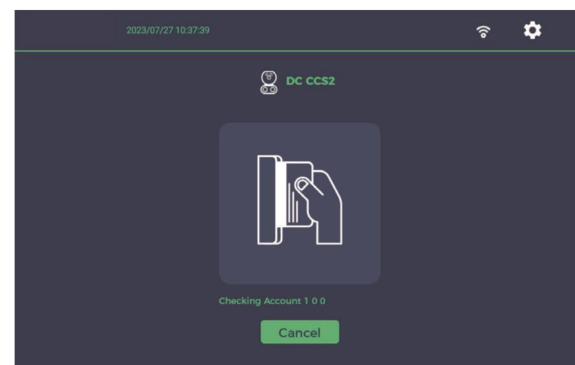
Open the 'Authenticate POS' button and set the pre authorization amount in local currency.

The pre authorization amount is a temporary amount reserved from the verified account before the start of charging, used to pay the charging fee.

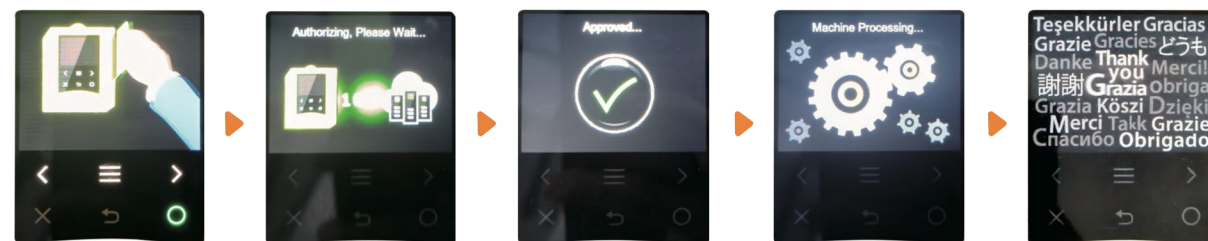
If the charging amount exceeds the pre authorization, the charging will automatically stop. If it is lower than the pre authorization, only the actual charging amount will be charged.



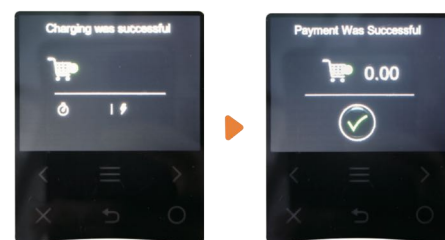
Insert the charging connector and select the corresponding payment method



Please swipe your card at the POS machine

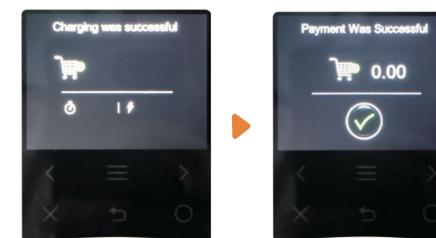
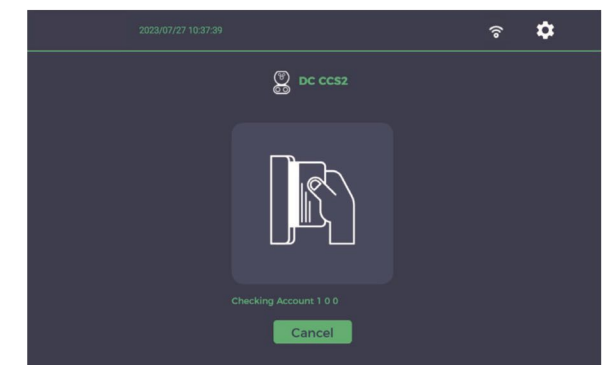
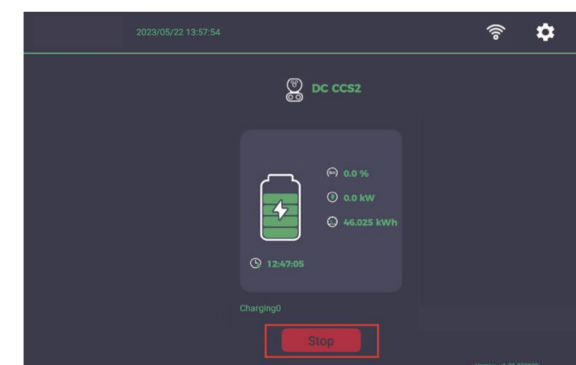


Wait until the POS machine prompts that the startup is complete, and the Charging station starts charging



When the vehicle is fully charged, it will automatically stop and deduct fees.

leading the charge



Press the "stop" button to stop charging, swipe the card again, and the POS machine will automatically settle the amount



* If you make any changes to the settings in the Android system, you will need to restart the 'chargerpointer' app.



5.3 Park & Plug APP Manual

5.3.1 Introduction

Park&Plug APP is a charging point management APP.

Park&Plug APP consists of two modules, Home and Commercial.

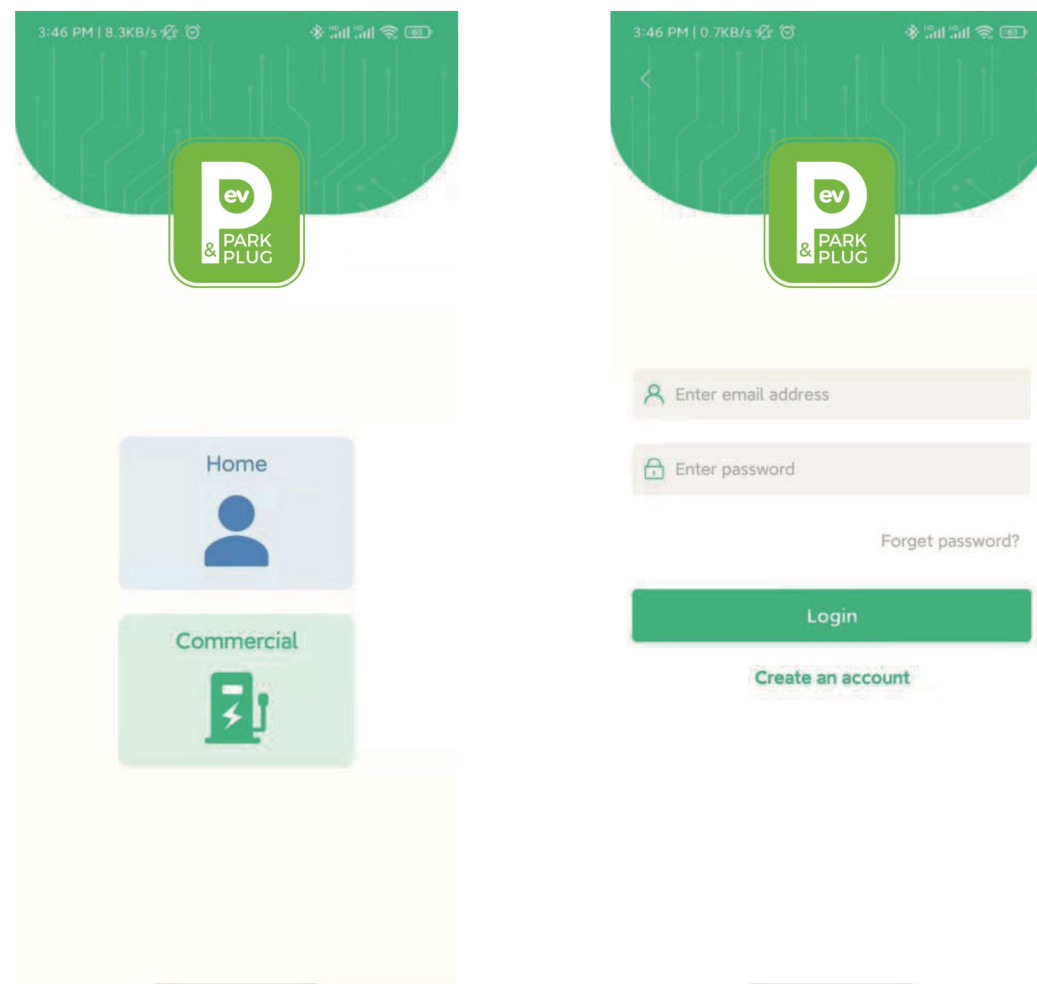
In the Home mode, you can control the Park&Plug Sparq smart wallbox charger.

In the Commercial mode, you can control the OCPP charger.

5.3.2. Login/Register/Forget Password

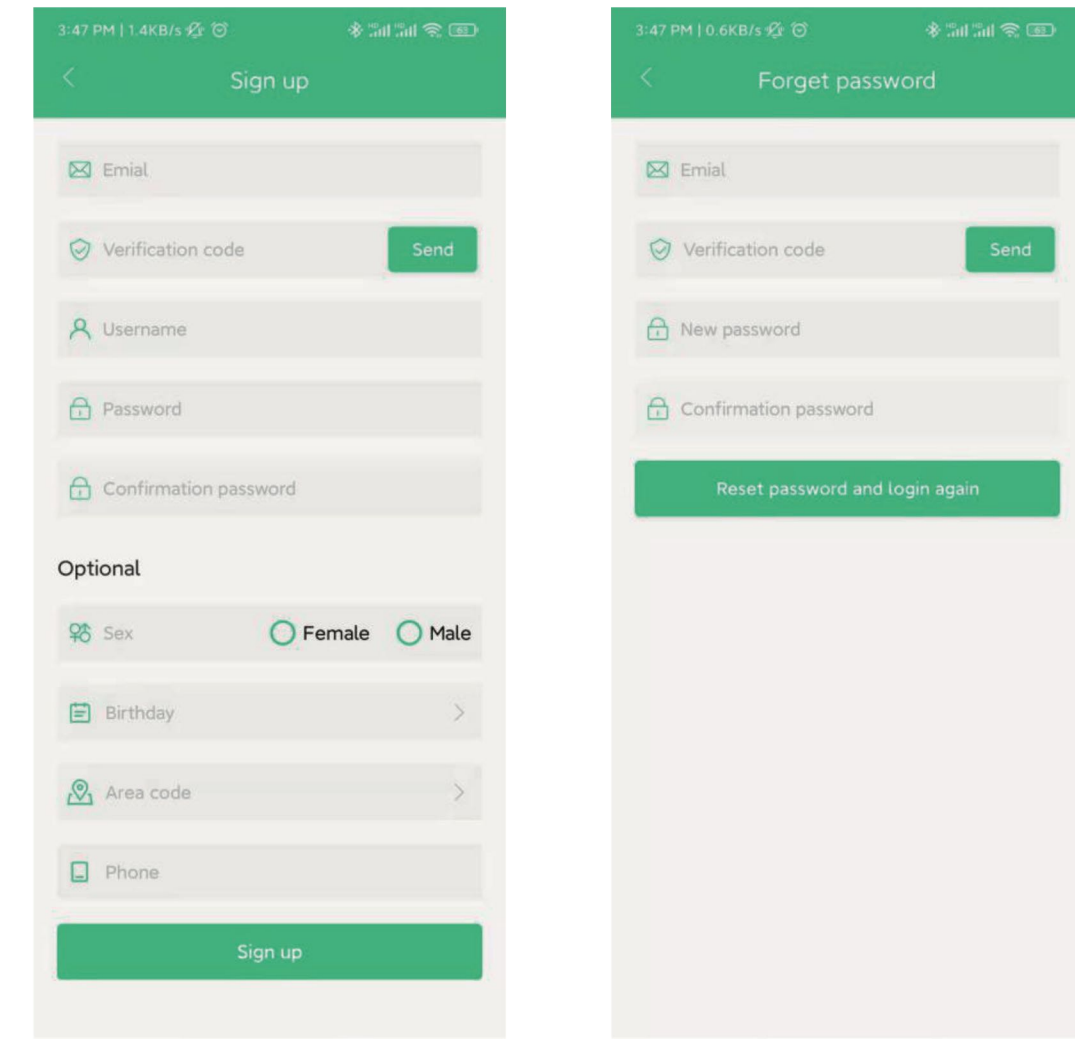
On the first page of Park&Plug APP, select the commercial, If you have not logged in before, the login page is displayed; otherwise, the main page is displayed.

Enter your account email and password to login.



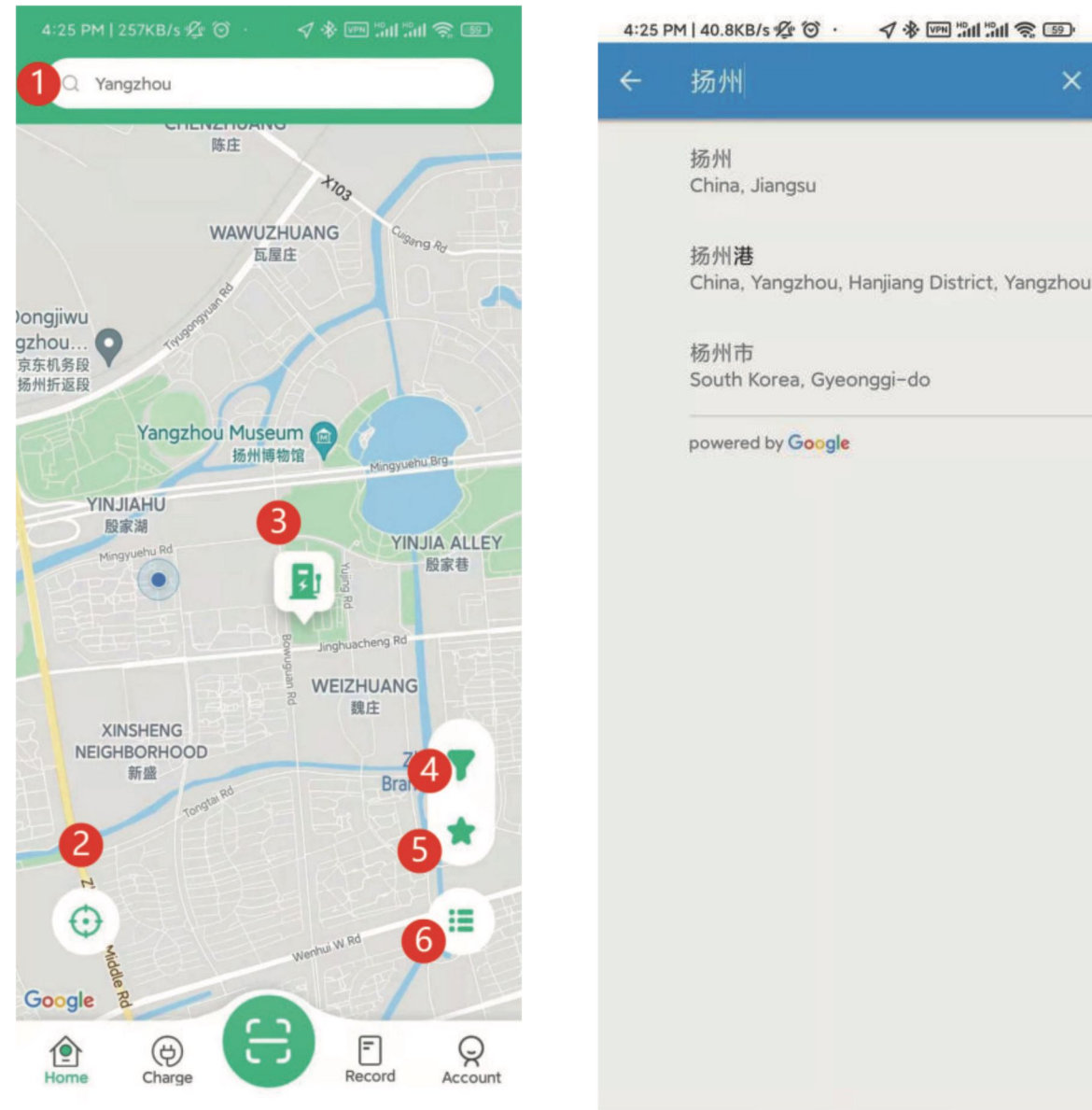
If you don't have an account, you can set up one first. In Sign up page, enter email, verification code(send via email), username and password and so on. After successful registration, log in to the system.

If you forget your password, you can use forget password to reset your password.

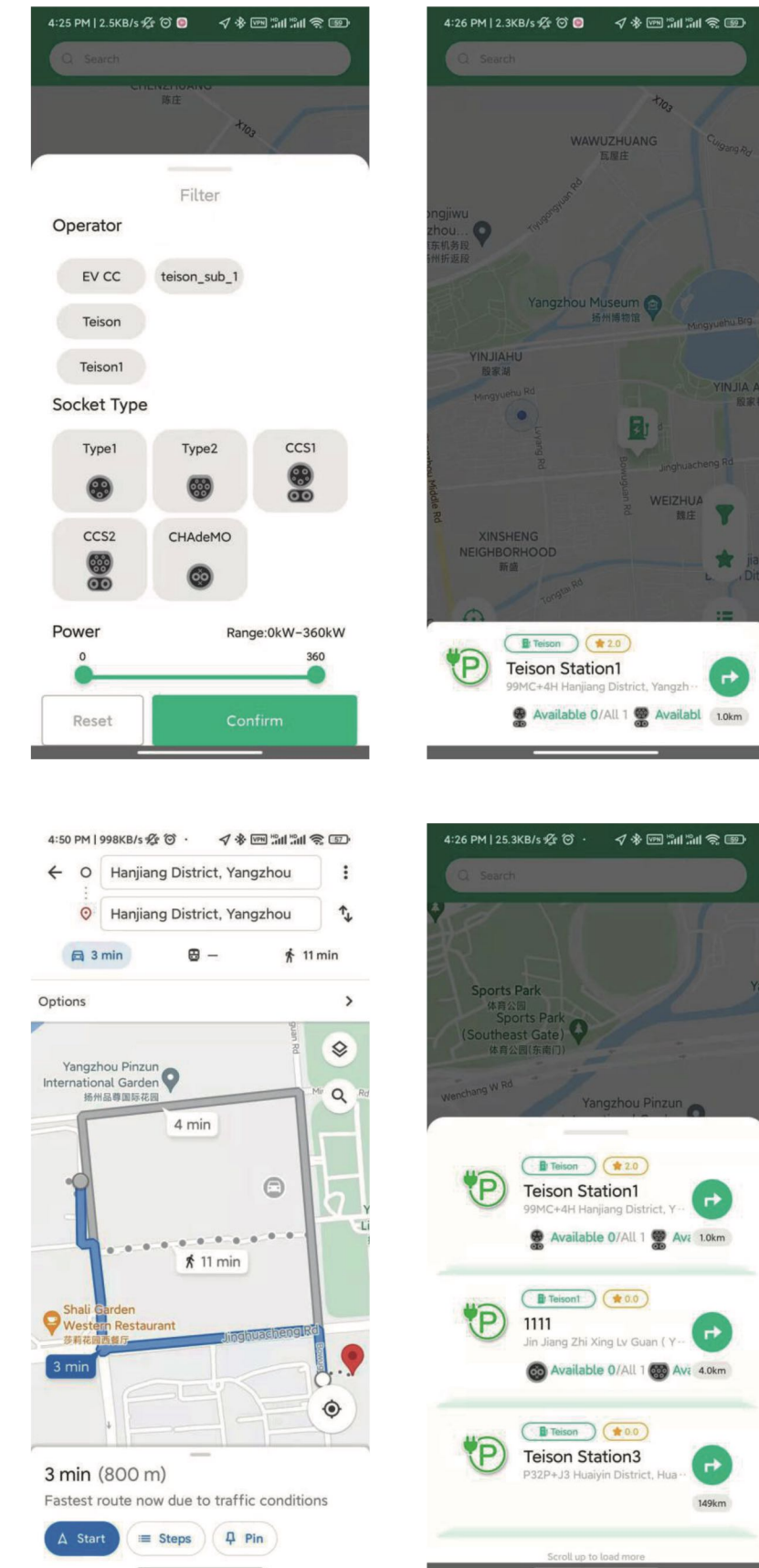


5.3.3 Home(Main)

- I. Search for locations on Google Maps or Apple Maps
- II. Locate the current location
- III. Click the charging station icon to view information about the charging station
- IV. Multi-condition find charging station
- V. Charging station Collection and Device Collection
- VI. View charging stations by list



By default, the charging station near the current location is displayed. If you want to search for a specific location, you can search the address bar above. Click icon 4, you can search the charging station in pop-up by condition of Operator, Socket Type, Power. Click icon 3, you can see the charging station detail in pop-up. Such as station name, operator, score, address, socket type and number, distance. And by click navigation icon, the Google/Apple Map popup navigation information; click station name you will enter the charging station details page. Click icon 6, you will view all the charging station by list. Click station name you will enter the charging station details page. Click the scan button at the bottom of the screen to scan the QR code of charging point and enter the charging point details page.

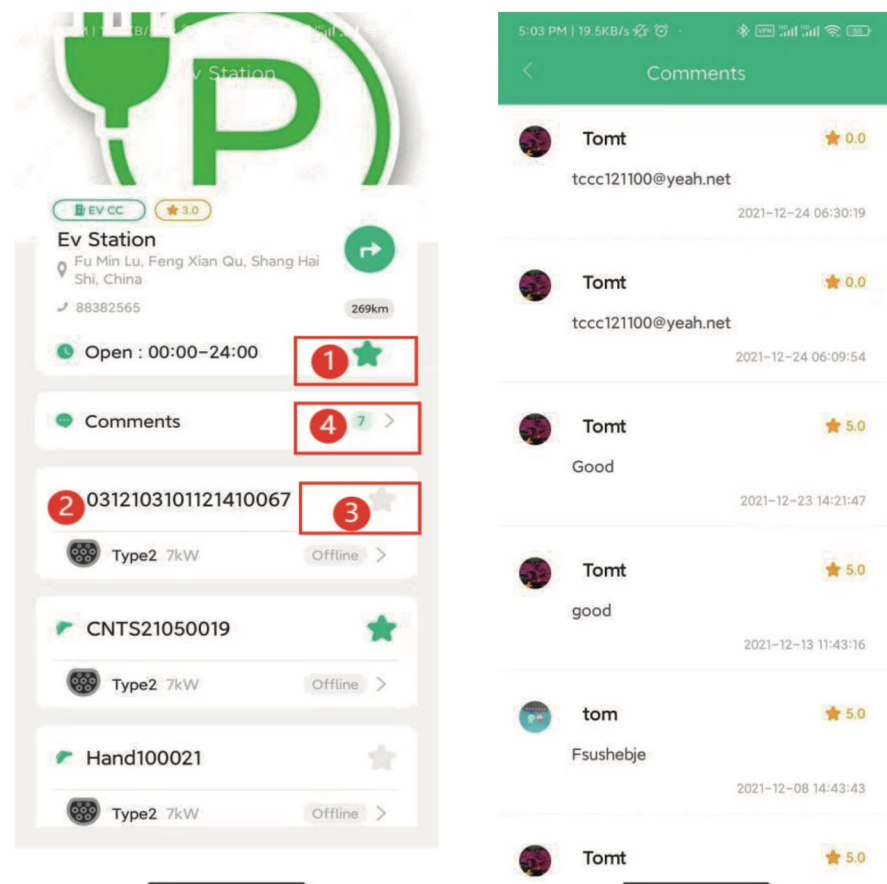




5.3.4.Charge Station

On the charging station details page, you can view the basic information of the charging station, the comment information of the charging station, the information of the charging point, and carry out relevant operations.

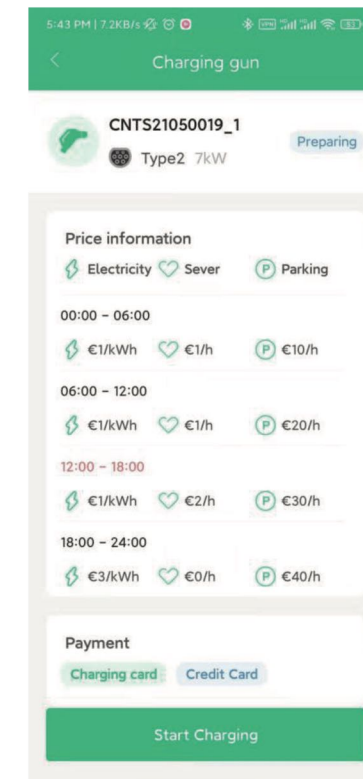
- I.Clickicon 1, you can add or cancel the charging station in to collection
- II.Clickicon 2, you will enter charging point detail page
- III.Clickicon 3, you can add or cancel the charging point in to collection
- IV.Click icon 4, you will enter charging station comments page, you can see all the comments of the charging station



5.3.5.Charging Connector

On the charging connector details page, you can view the basic information of the charging connector, including the serial number, type, power and status, as well as the charging strategy and payment method of the charging connector.

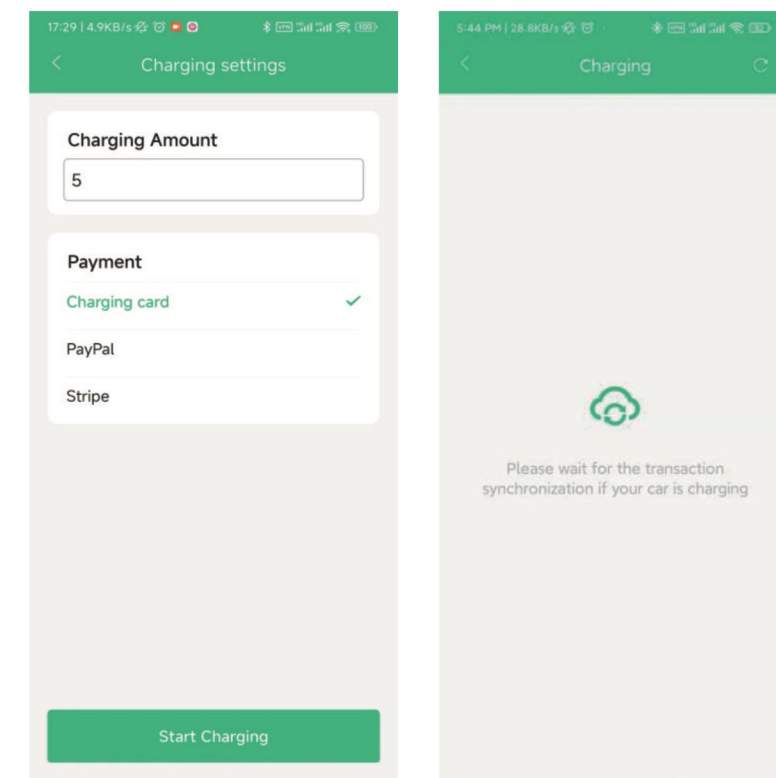
If the charging connector is in Preparing status, you can click 'Start Charging' to enter charging page. If the charging connector is not correct ,you can drop down to refresh the page.



5.3.6.Charging

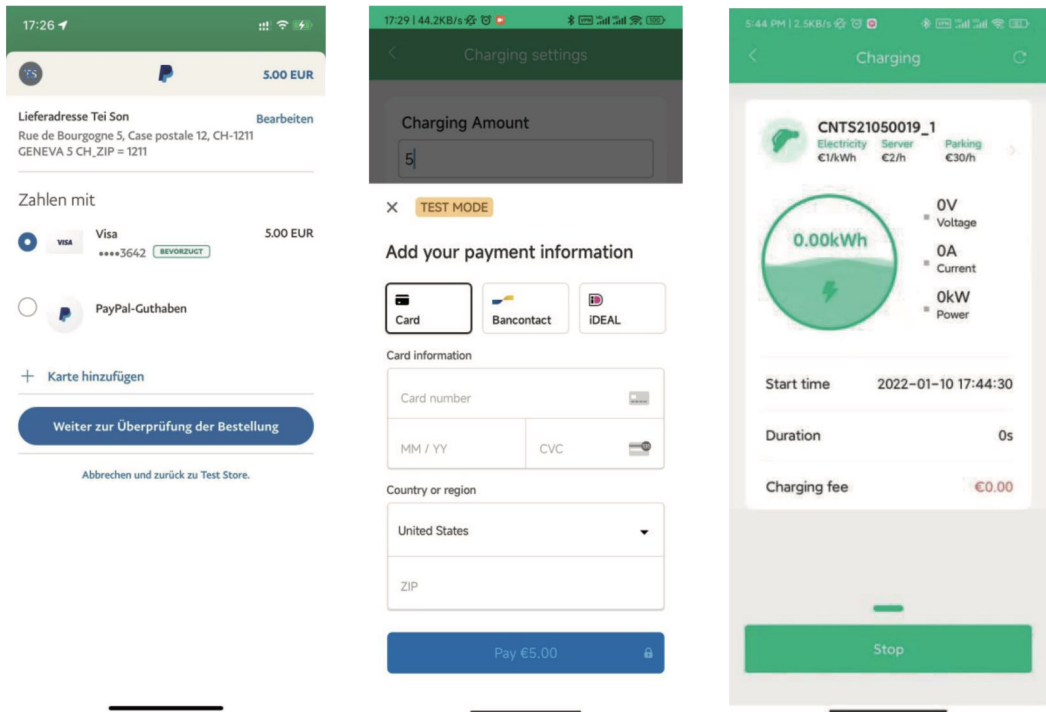
On the charging Settings interface, you can choose payment method, including Charging Card, Paypal and Stripe.

Fill in the charging amount which should not be less than that prompted by the system, and then click 'Start Charging'.





If PayPal and Stripe payment method have not been set up before, please enter PayPal and Stripe interface to bind credit card first.



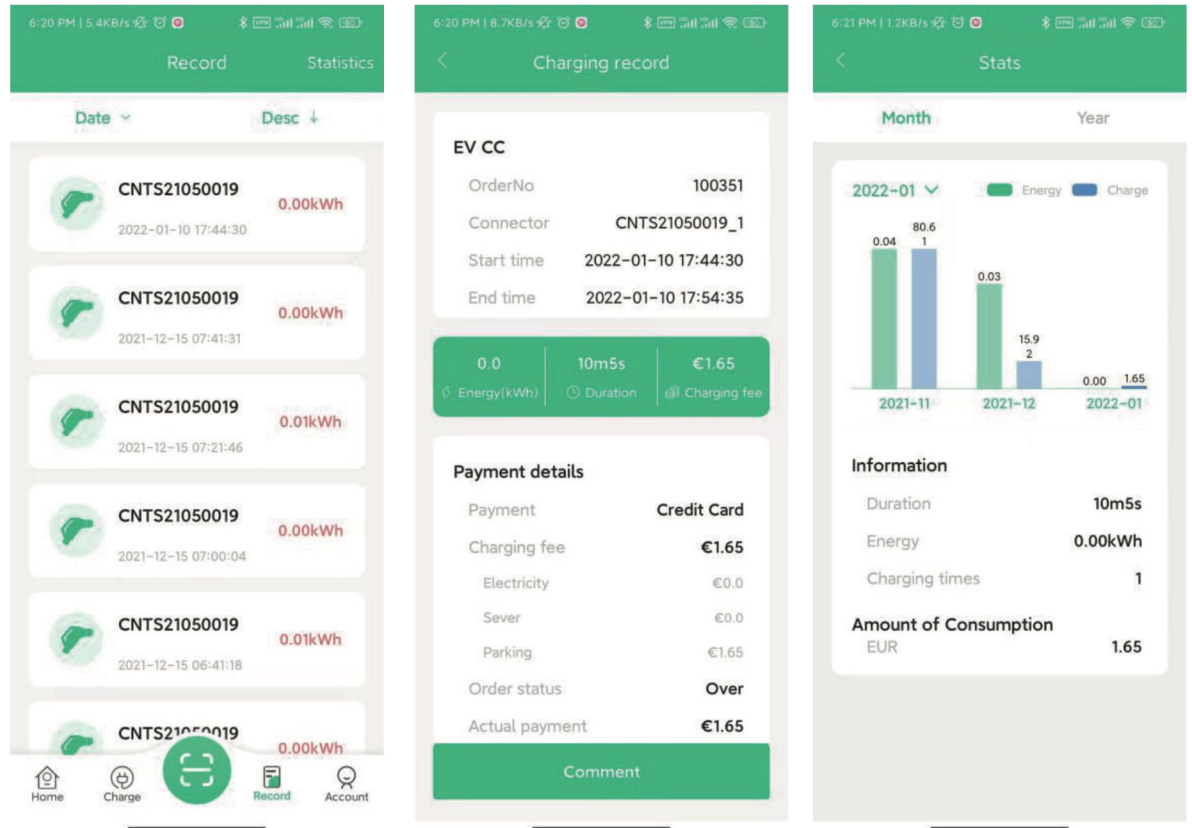
After starting charging, you will enter the charging details interface, where you can view real-time charging information, such as voltage and current power, charging start time, charging duration, and the amount of charge consumed. Click the Stop button when you want to stop the current charging.

5.3.7.Record

View the list of all charging records, and sort them by date, charging quantity, charging time and power consumption. Click one record to enter the page of charging record details.

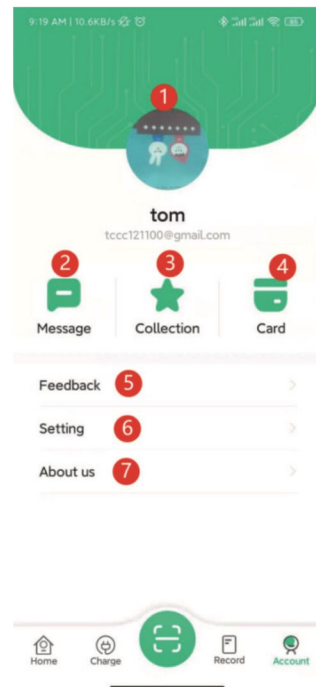
On the charge Record details page, view all the detailed information about the charge record.

On the charging record page, click Statistics in the upper right corner to enter the charging data Statistics page. View the last three months or three years of charging statistics.

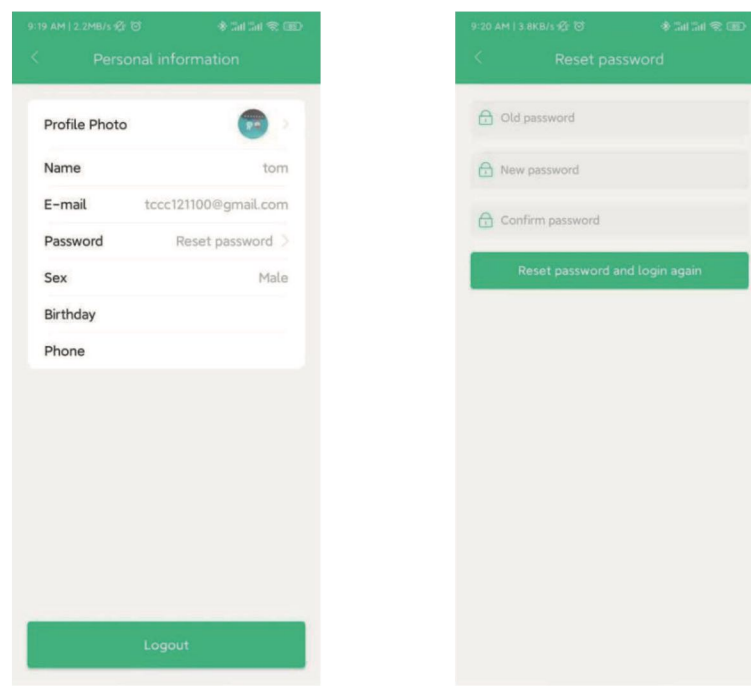


5.3.8.Account

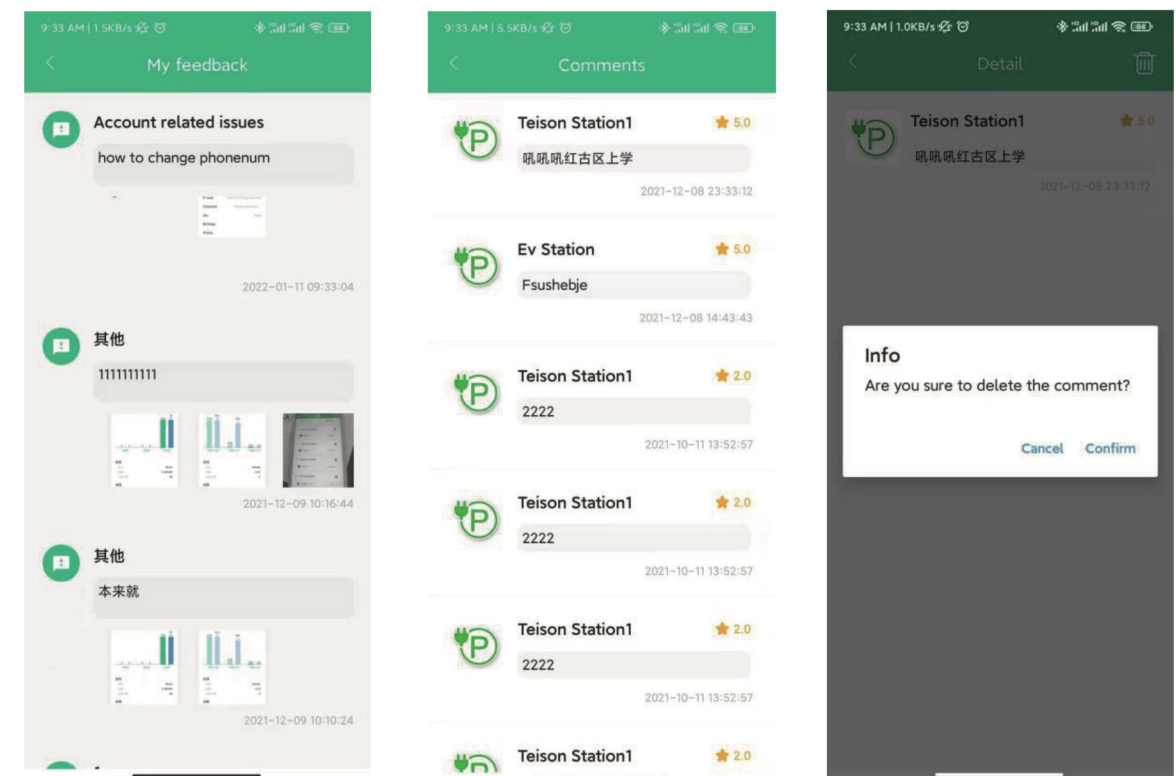
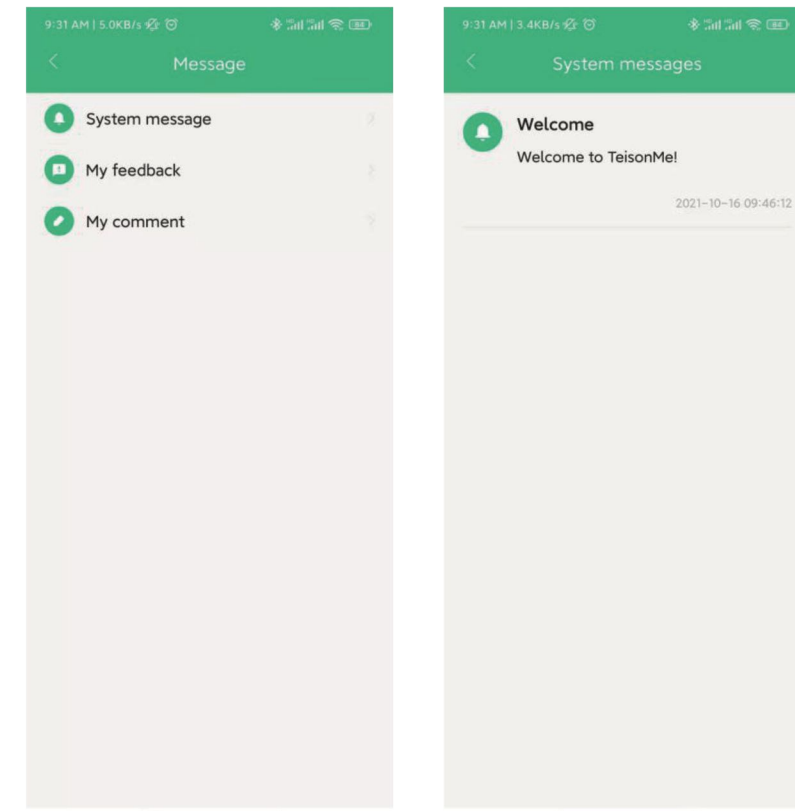
- I. Click icon 1, enter 'Personal information' page.
- II. Click icon 2, enter 'Message' page.
- III. Click icon 3, enter 'My Collection' page.
- IV. Click icon 4, enter 'My Charging Card' page.
- V. Click icon 5, enter 'Feedback' page.
- VI. Click icon 6, enter 'Setting' page.
- VII. Click icon 7, enter 'About us' page.



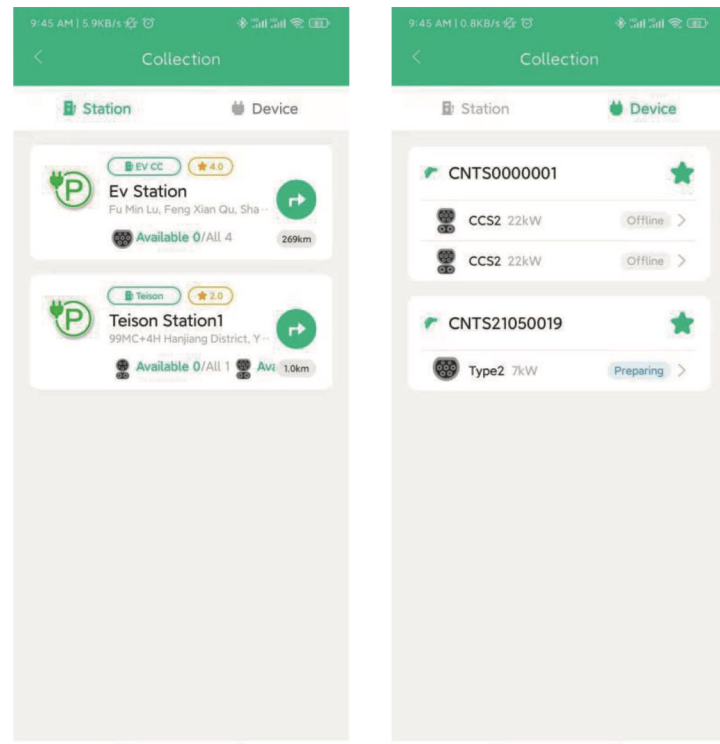
On Personal information page,View all personal information, click your profile picture, upload a new picture to modify your profile picture. Click Logout button to exit the current login, and click Reset Password to enter the interface for changing the Password. Enter the old Password, new Password, and new Password to confirm changing the login Password.



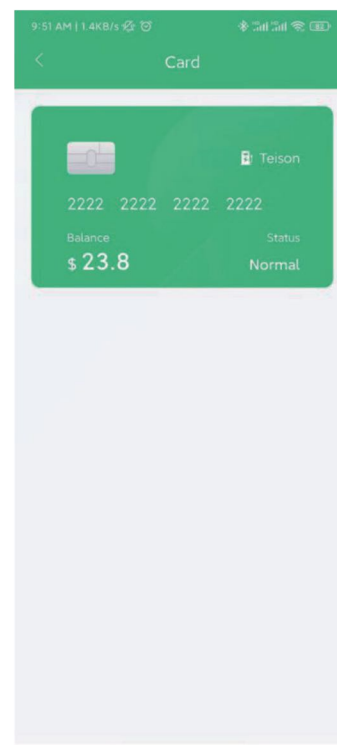
On the messages page, view system messages, my feedback, and my comments. Comments can be deleted on the comment details page.



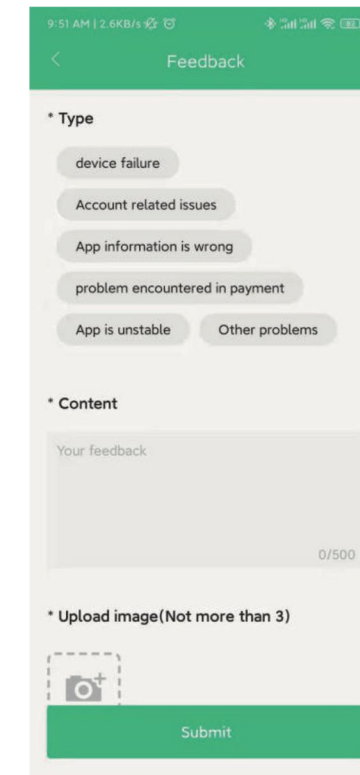
On my Collection page, view a list of all my favorite charging stations and a list of all my charging guns, click to enter the details page..



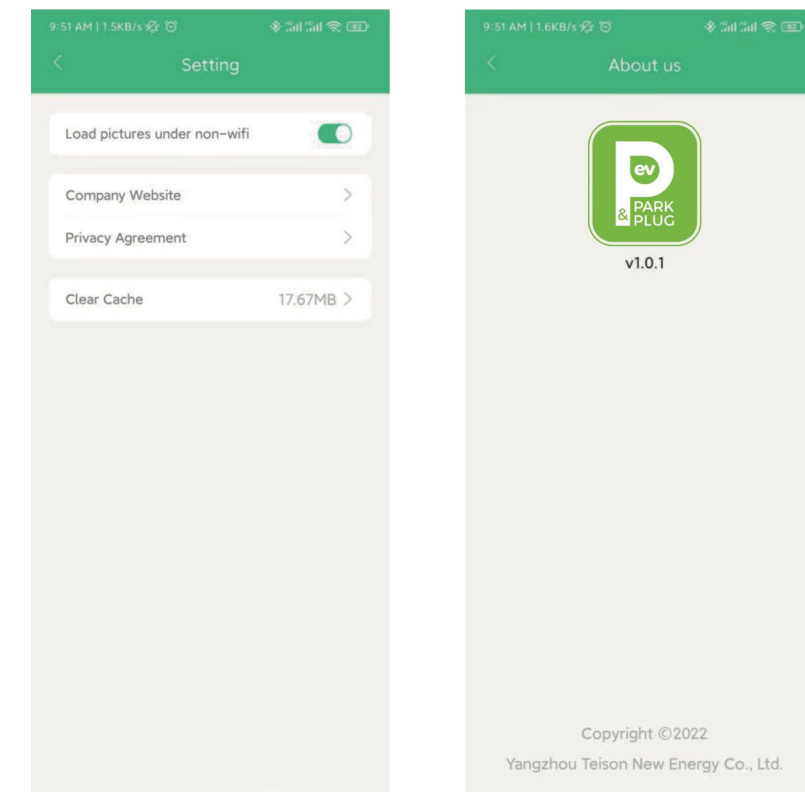
On my charging card page, view all my charging cards, including charging card number, balance, status, etc.



On my feedback page, add feedback, select feedback type, input feedback content, upload pictures.



On the Settings page, you can set the image to be displayed only in wifi environment, visit the official website, check the Privacy policy and clear the cache.



Checkout the Version of My Teison on the About Us page.



6. Transportation and preservation

- I. It is recommended to use a forklift for loading work.
- II. A lifting ring mounting hole is reserved at the top of the charger.
- III. Do not stack the charger during transportation.
- IV. Please bundle the equipment securely during transportation to prevent dumping.
- V. Please keep the outer packaging of the equipment until the installation site, so as to protect the charger's enclosure.
- VI. Keep the packaging film of the device when long-term storage for moisture protection.
- VII. The charger must be erected to prevent tilting or lying on the side.
- VIII. Prevent heat source away to the charger.
- IX. Store the equipment indoors, keep the environment dry and ventilated, and keep away from the water source.

7. General Troubleshooting

Trouble shooting No.	Fault phenomenon	Solution
1.	No display	I. Open the rear door to check the power supply wiring and contact. II. Open the front door to check the touch screen 2-pole power connector contact. III. Open the rear door and check the 10A fuse at the bottom of the cabinet by multimeter.
2.	Unable to charge	I. Check the emergency stop button. If it is pressed, release it in the direction of the arrow. II. Check the charging connector is in a good contact to EV. III. Open the front door and observe whether the POWER indicator of the power module is always light. IV. Open the rear door and check whether the input power of the power module is in a good contact. V. Check the corresponding circuit breaker of power module at the bottom of the cabinet tripping or not.
3.	No output under charging process	I. Open the rear door and check the corresponding DC contactor failure of the charging connector by multimeter. II. Open the rear door and check the corresponding fuse of the charging connector by multimeter.
4.	Insulation error	Check whether the insulation of the DC bus is in a normal status.
5.	Electricity meter communication failure	Open the rear door and check whether the RS485 connector of the meter is in good contact.
6.	Upriver power supply tripping frequently	I. Check whether the upriver circuit breaker is in a good condition. II. Replace the upriver circuit breaker to a larger rated current if the rated current is too small.
Warning: Withdraw the charging connector before electrical maintenance work! Be sure to cut off the circuit breaker of the charger cabinet and the upriver circuit breaker before electrical maintenance work!		

8. Maintenance and After-sales Service

Due to the influence of ambient temperature, humidity, dust and vibration, the components inside the charging station will be aging and wearing out, which will lead to the potential fault of the charging. Therefore, it is necessary to carry out daily and regular maintenance of the charging station to ensure its normal operation and service life.



- Only professional electricians or qualified personnel are allowed to operate;
- When maintaining or repairing the charging station, cut off the power supply of the incoming line and check components with high voltage and temperature to ensure safety before any operation;
- During equipment maintenance, take necessary protective measures to prevent the equipment from being powered on by mistake. Attach conspicuous maintenance labels and take isolation and protective measures for live parts
- Do not leave screws, washers and other metal parts in the charging station and take a comprehensive inspection after the maintenance.

8.1 Fault Handling



Note: common faults include user operations and device faults

Only professional electricians or qualified personnel are allowed to operate

	Issue	Reason	Handling Method
User Operations	No responding after plugging in the charging gun	The charging gun didn't fit properly	Re-plug in
		Vehicle ACC on or off (depending on the model of the vehicle)	Turn off or on vehicle ACC
		Device fault	Contact charging station supplier
	Low charging current	Large SOC of the vehicle	Normal
		Battery in self-protection state under low temperature	Warm up for a while to restore the current
	Emergency stop button pressed	Pressed by mistake	Release the button
	No responding after swiping the card	Not aligned to the card swiping area	Aligning to the card swiping area
		Far away from the card swiping area	Get closer
		Device fault	Contact charging station supplier

	Abnormal charging startup	BMS voltage setting error	Re-set according to the vehicle model
		Abnormity of vehicle battery voltage	Contact vehicle supplier
		Device fault	Contact charging station supplier
Device Faults	Background communication failure	Network fault or bad signal	Check network
		Insufficient traffic or network payment overdue	Recharge
	Input over/under voltage Output over current	Grid fault	Check the grid
		Parameter setting error	Check the parameter setting
	Charging module fault	Loose of charging module or cable	Re-connect the module or cable
		Charging module damage	Replace charging module
	Fan not working	The temperature did not reach	Check if temperature sensor