All rights reserved! Any company or individual person shall not copy or backup this user manual in any format (electronic, mechanical, photocopying, recording or other formats) without written permission from Launch Tech Co., Ltd (hereinafter referred to as "Launch"). The manual is for the use of the products manufactured by Launch, which shall not assume any responsibility for the consequences arising from the use of it to guide the operations of other equipment.

Launch and its branches will not bear any liability for the fees and expenses incurred by equipment damage or loss due to accidents caused by users or third parties, misuses and abuses, unauthorized modifications and repairs, or operations and services not following launch's instructions.

Launch assumes no responsibility for device damages or problems resulted from the usage of other parts or consumables, rather than original products of launch or products approved by the company.

Official statement: the mentioning of the names of other products in this manual is to illustrate how to use the device, with the ownership of the registered trademarks belonging to the owners.

The device is intended for the use of professional technicians or maintenance and repair personnel.

Registered Trademark

Launchhasregisteredits trademarkinchinaandseveralothercountries,andthelogois **LAUNCH**.

Other trademarks, service marks, dot names, icons, company names of launch mentioned in the user manual all belong to launch and its subsidiaries. In those countries where trademarks, service marks, dot names, icons, company names of launch have not been registered yet, launch declaims the right for its unregistered trademarks, service marks, dot names, icons, and company names. Trademarks of other products and company names mentioned in this manual are still owned by the original registered companies. Without written agreement from the owner, no person is allowed to use the trademarks, service marks, domain names, icons and company names of Launch or of other mentioned companies. You can visit https://www.cnlaunch.com, or write to Customer Service Center of Launch Tech Co., Ltd at Launch Industrial Park, North of Wuhe Road,Bantian Street,Longgang District,Shenzhen City, Guangdong Province, P.R.China, to get contact with Launch for the written agreement on the usage of the user manual.

Disclaimer of Warranties and Limitation of Liabilities

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publication.

The right is reserved to make changes at any time without notice. We shall not be liable for any direct, special, incidental, indirect damages or any economic consequential damages (including the loss of profits) due to the use of the document.

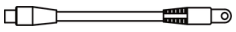
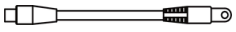
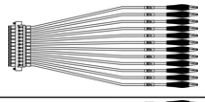
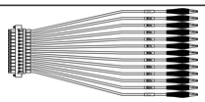
Contents

1. Product Overview

EVP711 is an EV battery pack module charging and discharging device developed by Launch. It adopts the most advanced charging and discharging technology, according to the charging and discharging characteristics of lithium and Ni-MH batteries, has built-in various test and maintenance modes, which are suitable for the discharge, charging, cycle charging and discharging tests of various lithium and Ni-MH batteries on the market. The device adopts an intelligent operating system, so that users and managers can easily and scientifically maintain and manage the battery pack, thus extending the service life of the battery pack.

2. Product composition and accessories

The device is mainly composed of main unit, temperature and voltage acquisition box, discharge cables, etc. The following accessories are for reference only. For product configuration details, please consult from the local agency or check the package list supplied with this device together.

No.	Name	Q'TY	Reference Picture
1	Main Unit	1	
2	Temperature and voltage acquisition box	1	
3	AC power cord (Include UK/US/EU/AU)	1	
4	AC power cord (Single-phase three wire)	1	
5	DC test cable-Positive (Red)	1	
6	DC test cable-Negative (Black)	1	
7	Network cable	1	
8	Voltage acquisition cable (12P)	1	
9	Voltage acquisition cable (13P)	1	
10	User manual	1	
11	Packing list	1	

3. Precautions for Safe Use

(1) Followtherelevantrequirementsintheusermanualtooperatethedevice.
(2) Whenoperatingthedevice,pleasetakeinsulationprotectionmeasuresandweardryandclean insulating gloves.
(3) Incaseofabnormality,pleasedisconnectthedevice'sworkingpowersupplyandtestcable.

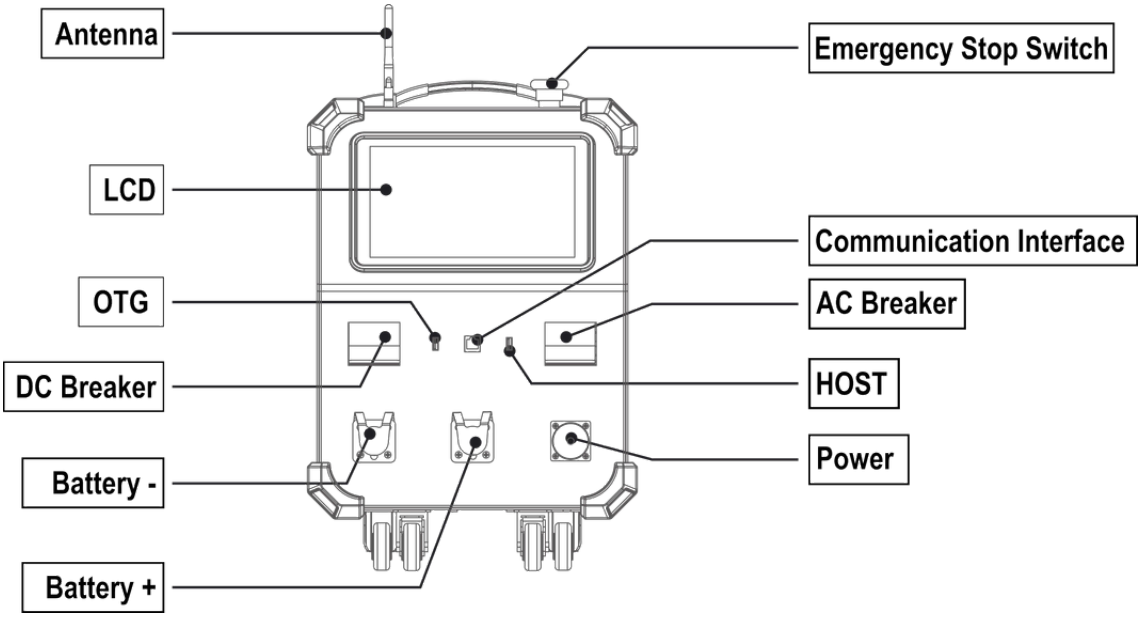
4. Technical Features

Parameter	Description
Model	EVP711
Power input	AC 90-264V
Display	10-inch LCD screen
Data communication	RS485
Data dump	U disk
Data storage	32G
Module data acquisition communication	Harness sampling
Group voltage accuracy	≤±(0.5%FS+0.3V)，resolution0.001V *Note: The voltage displayed during the testing process may deviate from the actual voltage. Please refer to the static voltage when the test is stopped.*
Cell voltage accuracy	≤±(0.1%FS+5mV) resolution 0.001V *Note: The voltage displayed during the testing process may deviate from the actual voltage. Please refer to the static voltage when the test is stopped.*
Current measurement accuracy	≤±(1%FS+0.2A)，resolution：0.1A
Charging voltage range	DC 2~400V
Discharge voltage range	DC 2~400V
Charge current range	0~100A，maximum power 4.4kw
Discharge current range	0~100A，maximum power 7.2kw
Charge control	Constant current charging + constant voltage charging
Discharge mode	Constant current discharge
Protection mechanism	Overcharge and over discharge protection

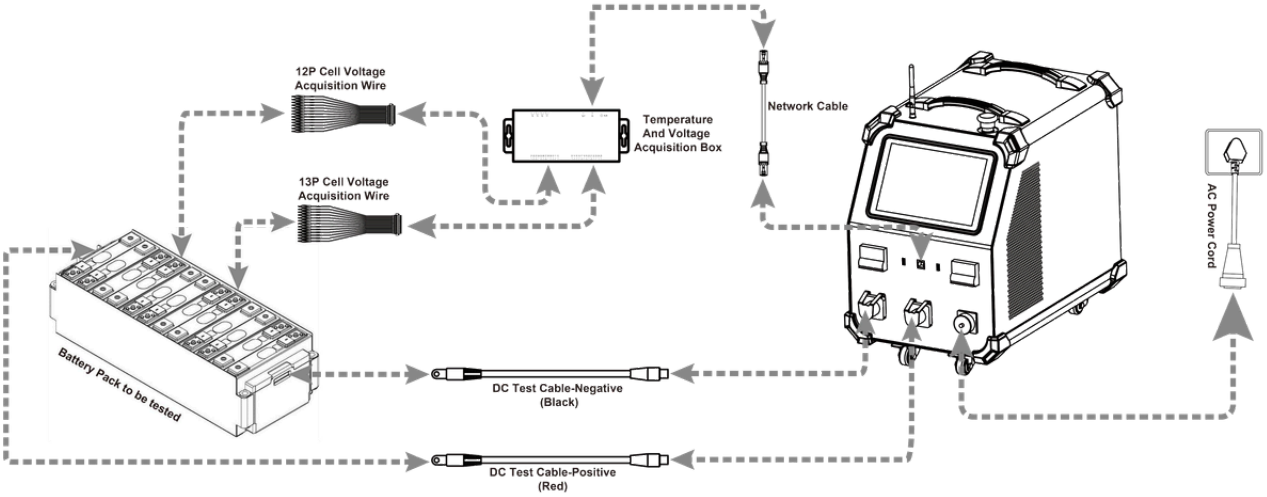
	Over voltage, over current, over temperature protection Battery short connection, reverse connection protection Abnormal protection against power cord and main cable failure Fan abnormal protection
Shutdown actuator	DC breaker + release
Alarm prompt	Screen prompt + buzzer
Working Environment	
Cooling	Forced air cooling
Temperature	Operating temperature range: -5~40 ℃ ; storage temperature:-20~70 ℃
Humidity	Below 90% RH
Dimension	349.0*551.1*598.5 mm

5. Operating Instructions

5.1 Panel Description



5.2 Main Unit Connection



DC test cable connection

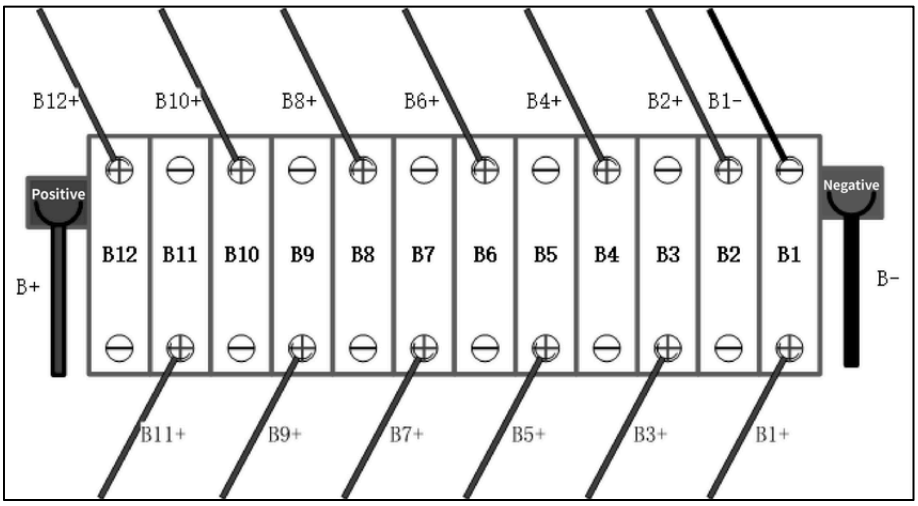
Insert the black DC test cable into the Battery - interface (Black) of the device, and connect the other end to the negative pole of the battery module; insert the red DC test cable into the Battery + interface (Red) of the device, and connect the other end to the positive pole of the battery module.

Voltage Sampling - Module Sampling

(1) Usecommunicationnetworkcabletoconnectthecommunicationinterfaceofthedeviceandthe IN interface of the temperature and voltage acquisition box.

(2) If the number of test cells does not exceed 12: use a 13P voltage acquisition cable (connected to the 13P acquisition interface of the voltage and temperature acquisition box);
If the number of test cells exceeds 12: an additional 12P voltage acquisition cable needs to be used (connected to the 12P acquisition interface of the voltage and temperature acquisition box);
If the number of test cells exceeds 24: need to add more voltage and temperature acquisition boxes (up to 3 voltage and temperature acquisition boxes can be connected).

(3) Accordingtothewirelabelonthecellvoltageacquisitionwire,B1-isconnectedtothenegative electrode of No. 1 single cell (B1), B1 + is connected to the positive electrode of No. 1 single cell (B1), B2 + is connected to the positive electrode of No. 2 single cell (B2), and connected in sequence.



Temperature Sampling - Module Sampling

Connect one end of the temperature acquisition wire (optional) to the temperature acquisition interface of the temperature and voltage acquisition box, and connect the other end (probes or clips) to the battery cells.

Working Power Supply Connecting:

Connect the AC power cord (Include UK/US/EU/AU, choose the appropriate plug according to the region of use) equipped with the device to connect the device power interface and power socket to power the device. At this time, it is recommended to only use it for operating the discharge function.

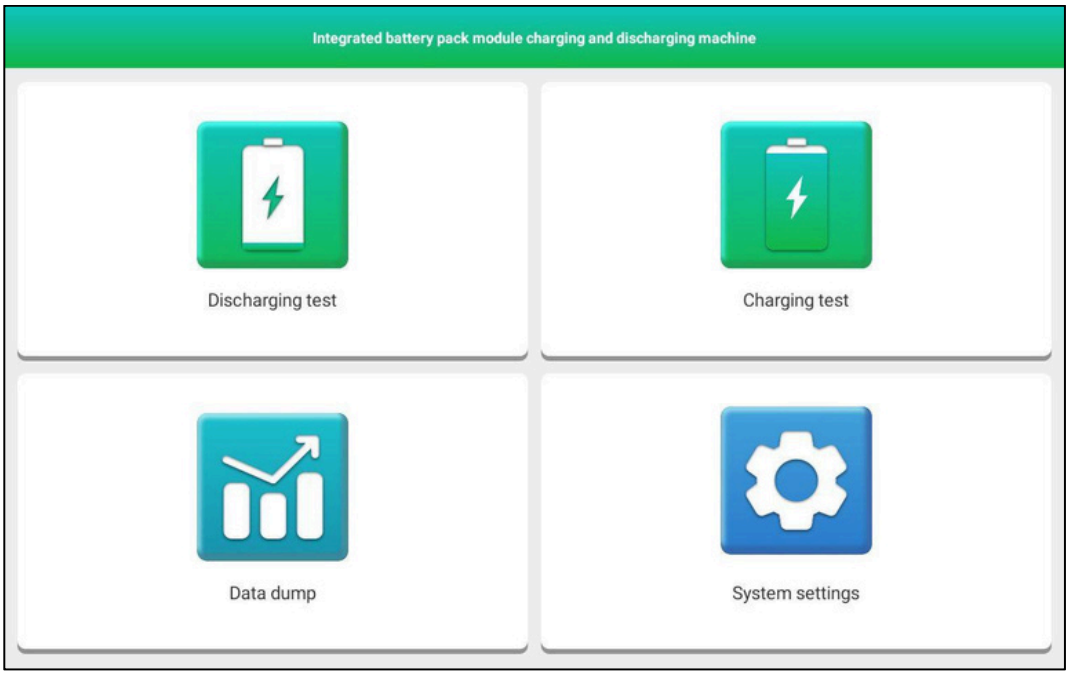
Connect the single-phase three wire AC input power cord equipped with the device to the power interface, and connect the other end of the power cord to the distribution box to supply power to the device. At this time, the device can operate charging and discharging functions. Please set the charge current limit according to the size of the connected AC input load (see parameter table for details) to prevent overcurrent.

5.3 Main Unit Operation

After the device is connected, close the AC breaker to turn on the device, then set the charging and discharging parameters and protection conditions, and close the DC breaker before starting the test.

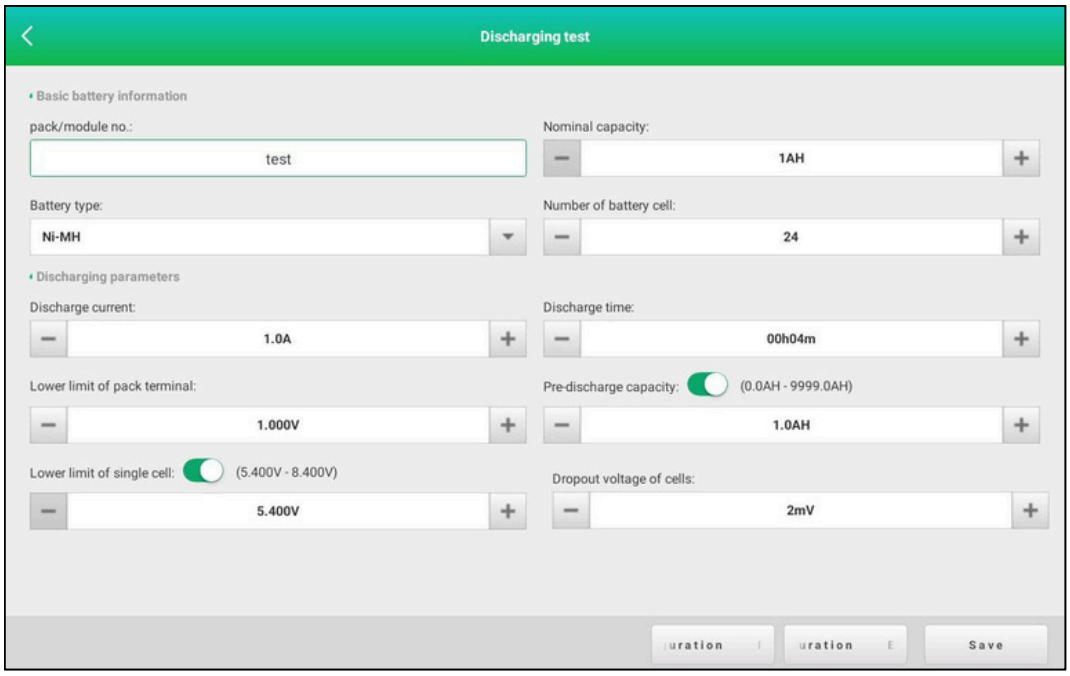
5.3.1 Main Menu

Click the function module on the main menu to enter the corresponding function operation interface.



5.3.2 Discharging Test

(1) Click "Discharging Test" to enter the following interface, set the battery information and corresponding discharging parameters.



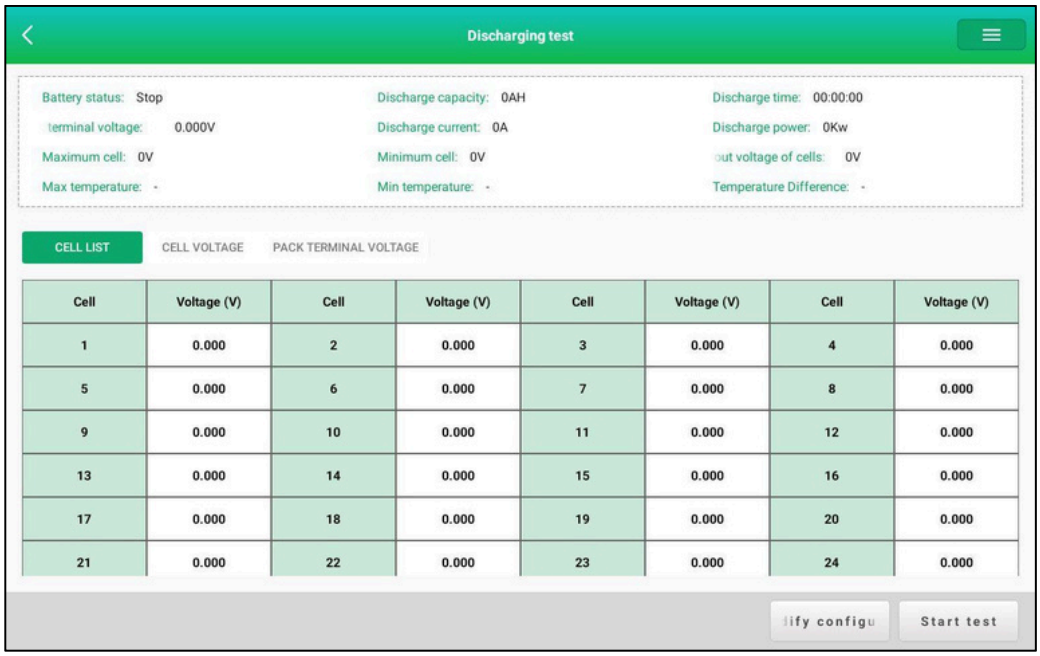
Parameter Description:

Battery Information	
Pack/module no.	The number of the battery pack or module.
Nominal capacity	The nominal capacity of the battery pack, according to the actual input, can be identifie from the rating plate.
Battery type	Select battery type.
Number of battery cell	Fill in according to the actual number of strings.
Discharge Parameters	
Discharge current	Discharge test current value.
Discharge Time	The discharge will stop when the set discharge time is reached.
Lower limit of pack terminal	The discharge will stop when the set lower limit voltage value of the group terminal is reached.
Pre-discharge capacity	The discharge will stop when the set pre-discharge capacity is reached.
Lower limit of single cell	The discharge will stop when the set lower limit voltage value of the single string is reached.
Dropout voltage of cells	The difference between the highest and lowest cell voltages, the system will stop discharging when it reaches the set value.

(2) Click**Save**tosaveconfigurationandenterthedischarginginterface.ClosetheDCbreaker,tap **Start test** to start the test.

The current battery status, the discharge current, the discharge time, the current voltage of the battery pack and the cell voltage information can be viewed on the discharging interface.

Note: Before starting test, the previously set parameters can be modified using the "Modify Configuration" button. After starting test, the set parameters cannot be modified during the discharging process.

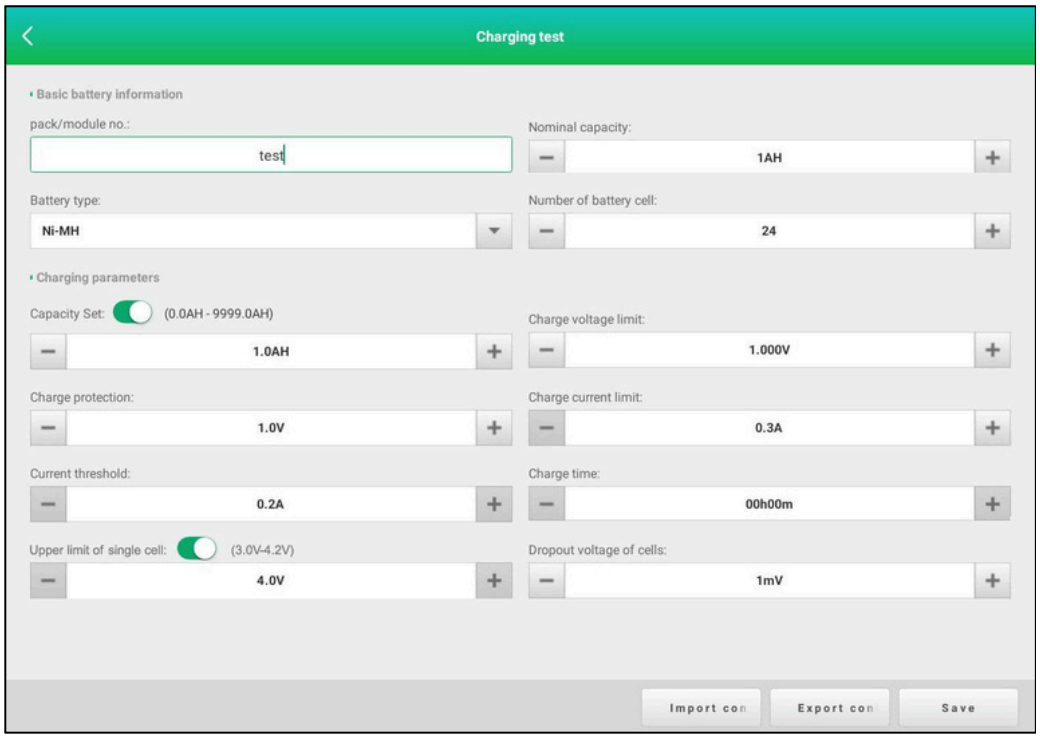


(3) Intheprocessofdischarging,thedischargingwillautomaticallystopwhenanysetthresholdis reached. Type of stop discharge conditions: discharge time, lower limit of pack terminal, pre-discharge capacity (when there is a limit on discharge capacity), lower limit of single cell (when there is a limit on discharge capacity), and dropout voltage of cells.

(4) Inadditiontotheabovethresholdprotection,abnormalshutdownprotectionalsohasmultiple protections: discharge overvoltage and overcurrent protection; battery short circuit and reverse connection protection; fan abnormality protection, etc.

5.3.3 Charging Test

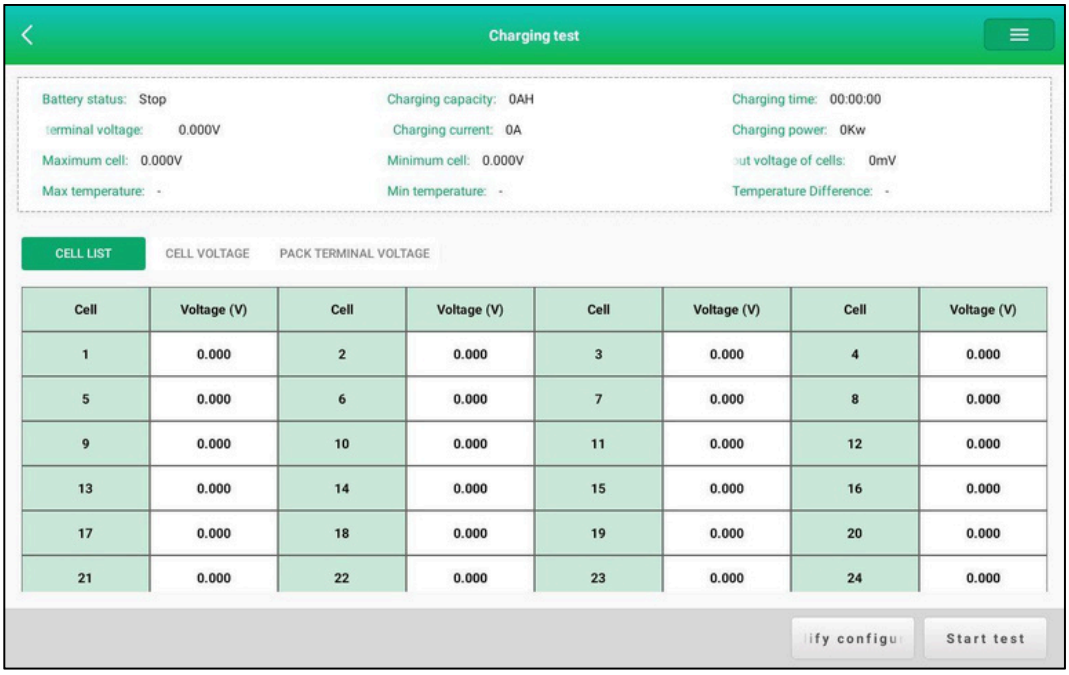
(1) Click "Charging Test"toenterthefollowinginterface,setthebatteryinformationandcorresponding discharging parameters.



Parameter Description:

Battery Information	
Pack/module no.	The number of the battery pack or module.
Nominal capacity	The nominal capacity of the battery pack, according to the actual input, can be identifie from the rating plate.
Battery type	Select battery type.
Number of battery cell	Fill in according to the actual number of strings.
Charge Parameters	
Capacity set	The charge will stop when the set charging capacity is reached.
Charge voltage limit	The target value of the charging voltage.
Charge protection	The charge will stop when the set upper limit voltage value of the pack terminal is reached.
Charge current limit	Limit the charging current to not exceed this set value.
Current threshold	The charge will stop when when the voltage reaches and the current is less than the se threshold.
Charge time	The charge will stop when the set charging time is reached.
Upper limit of single cell	The charge will stop when the set upper limit value for a single cell voltage is reached
Dropout voltage of cells	The difference between the highest and lowest cell voltages, the system will stop charg when it reaches the set value.

(2) Click **Save** to save configuration and enter the charging interface. Close the DC breaker, tap **Start test** to start the test.



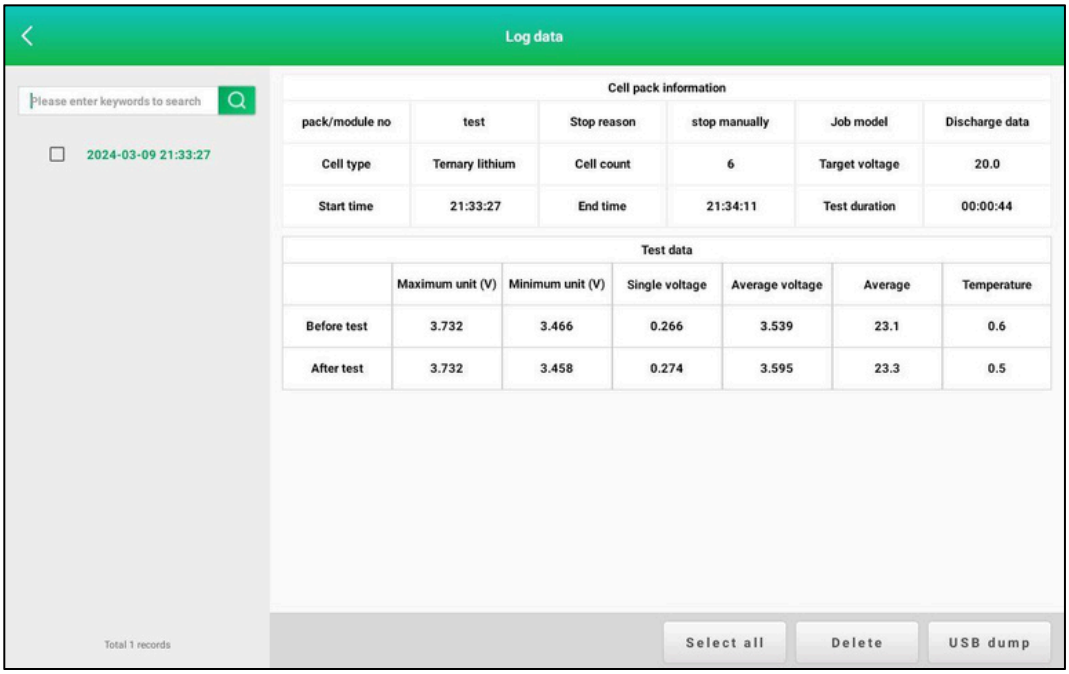
The current battery status, the charging current, the charging time, the voltage of the battery pack and the cell voltage information can be viewed on the charging interface.

Note: Before starting test, the previously set parameters can be modified using the "Modify Configuration" button. After starting test, the set parameters cannot be modified during the charging process.

(3) Intheprocessofcharging,thechargingwillautomaticallystopwhenanysetthresholdis reached. Type of shutdown conditions: charging capacity (when there is a limit on charge capacity), charge protection voltage threshold, current threshold, charge time, upper limit of cell voltage (when there is a limit on charge capacity) and dropout voltage of cells.

(4) Inadditiontotheabovethresholdprotection,abnormalshutdownprotectionalsohasmultiple protections: charge overvoltage and overcurrent protection; battery short circuit and reverse connection protection; fan abnormality protection, etc.

5.3.4 Data Management



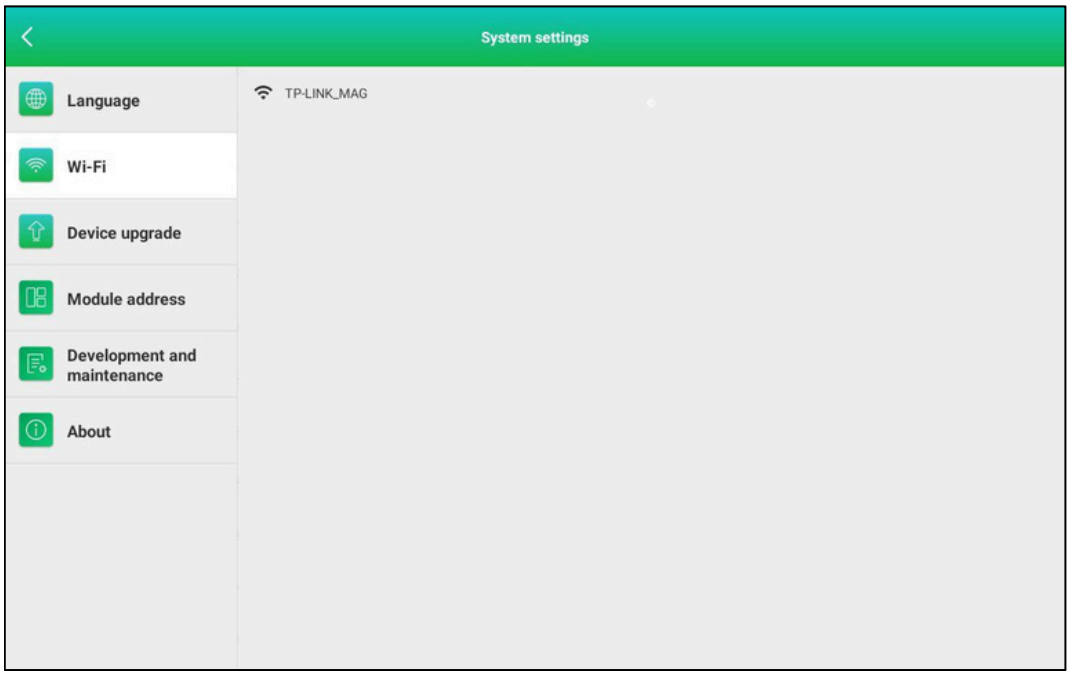
Insert a U-disk into the OTG or HOST port on the panel, select the data to be saved, and tap **USB dump** button to transfer the corresponding discharge data and charge data to the U-disk.

5.3.5 System Settings

Tap **System Settings** onthemaininterfacetoenterthesystemsettingsinterface,whichincludes Language, Wi-Fi, Device upgrades, Module addresses, Development and maintenance, and About.

Language: Used to change the system language.

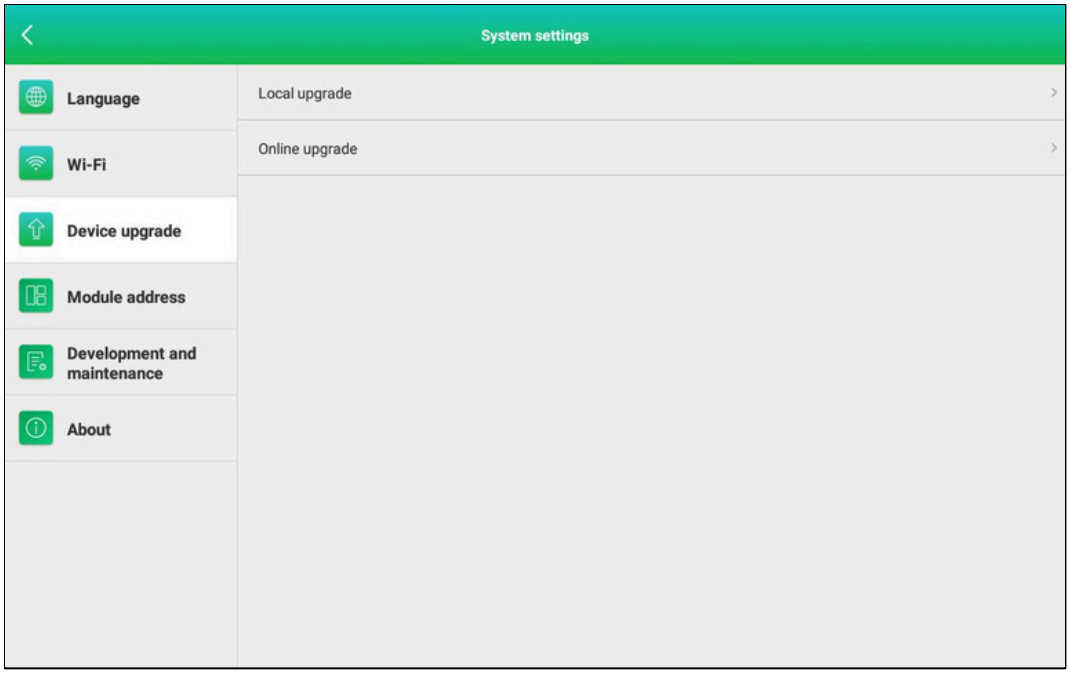
W i-Fi Used to connect the Wi-Fi networks.



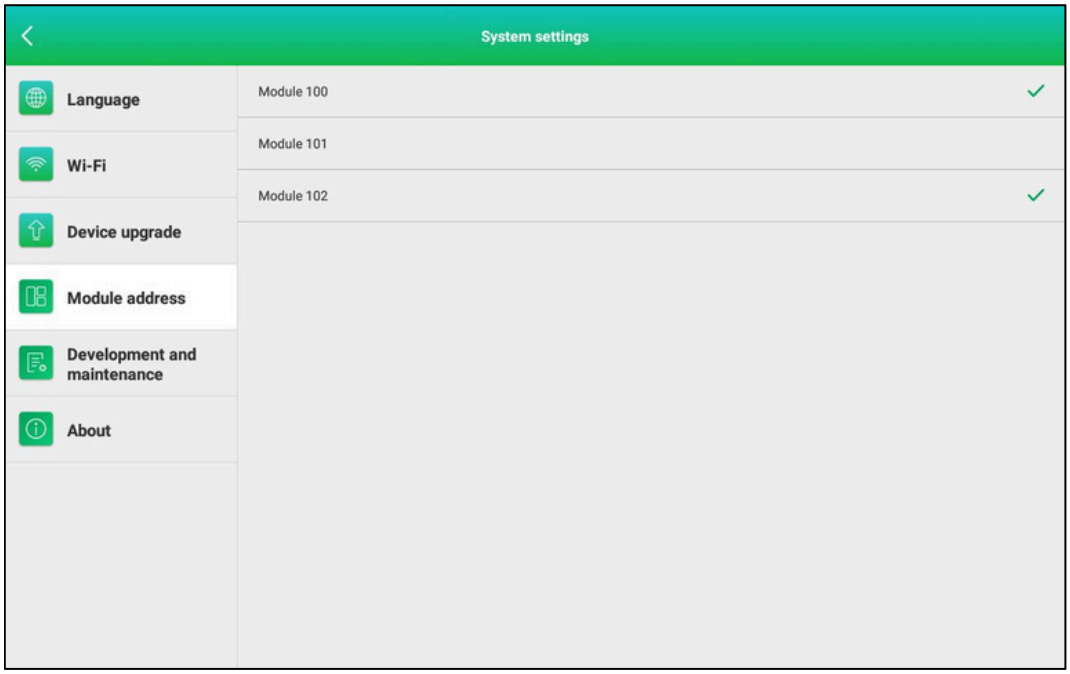
Device upgrade：Used for APP upgrade, including local upgrade and online upgrade functions.

APP local upgrade: Copy the upgrade package to the USB. After connecting to the device, select the corresponding upgrade package to upgrade the device.

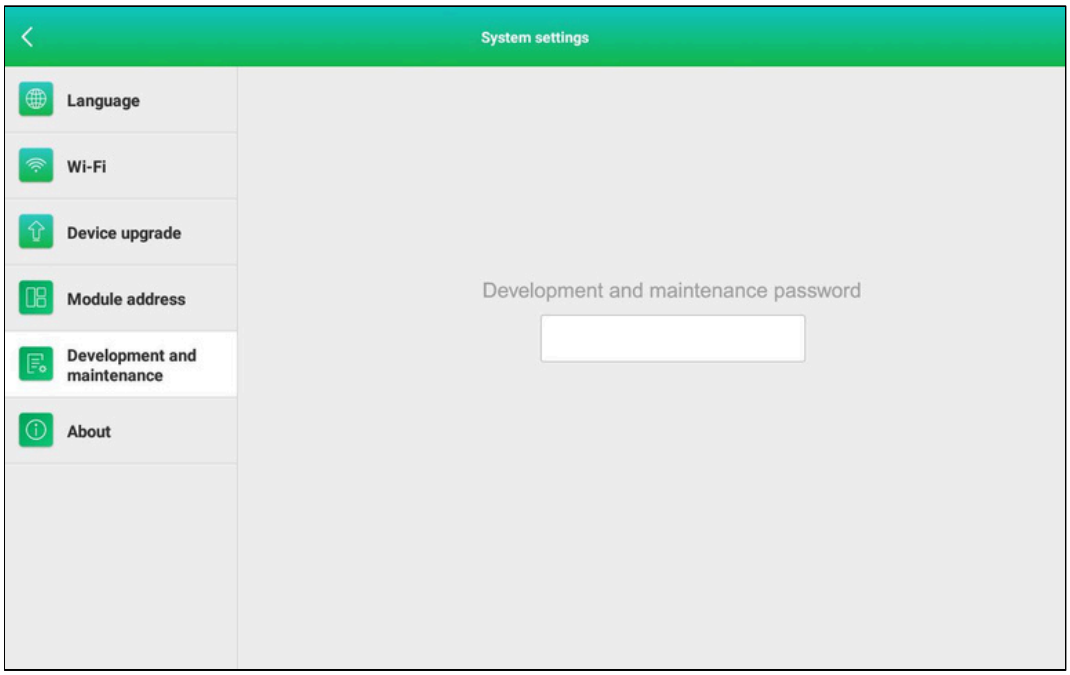
APP online upgrade: After connecting to Wi-Fi, click "Online upgrade" to upgrade the device software to the latest version.



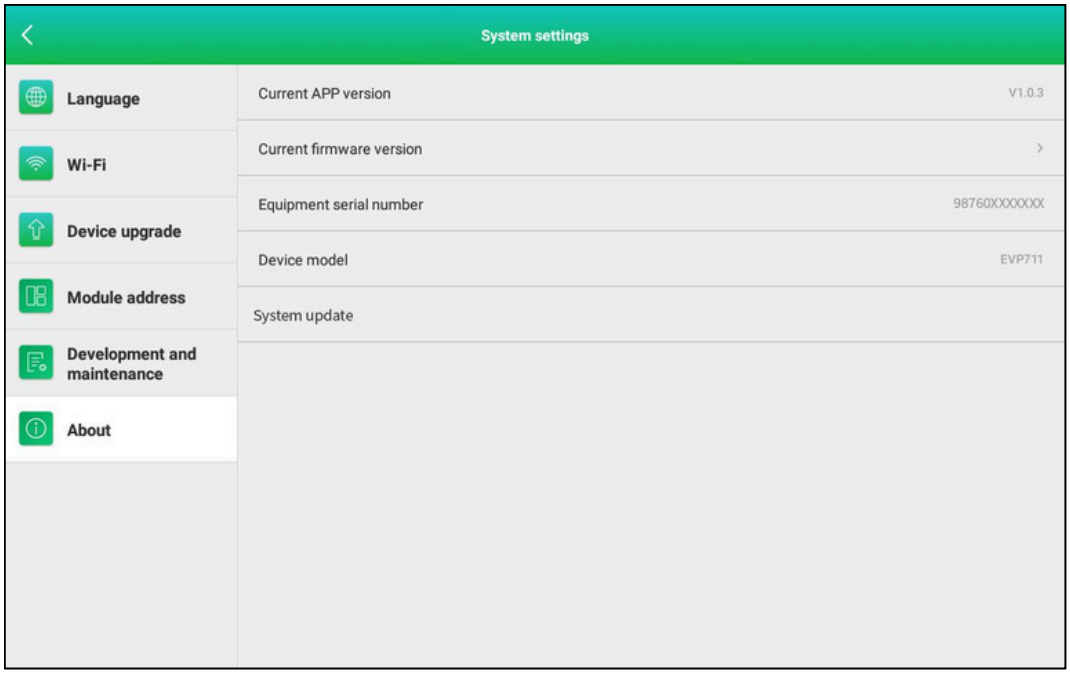
Module address：Used to select acquisition modules.



Develop and maintenance：Only for development and maintenance.



About：Used to view system version information, etc.



6. Fault Analysis and Troubleshooting

No.	Fault Situation	Troubleshooting Methods
1	The bottom left corner of the screen prompts "Single cell voltage acquisition module not connected"	Check the communication connection between the tested battery module and the voltage and temperature acquisition box.
2	Pop up warning “Discharge cable positive and negative pole alarm”	The positive and negative poles of the discharge cable are reversed
3	Pop up warning "Abnormal voltage at pack terminal or DC breaker not closed"	1) The DC breaker is not closed. 2) Test input voltage is too high.
4	Main unit temperature is too high	Confirm the placement of the device, pay attention to ventilation, heat flow, make sure that there are no debris placed within 0.5 meters of the device ventilation opening.