

# **Home storage upper monitor system software operating manual**

# Catalogue

<b>1. INTRODUCTION TO SOFTWARE FUNCTIONS .....</b>	<b>1</b>
<b>2. SOFTWARE RUNNING ENVIRONMENT .....</b>	<b>1</b>
<b>3. MENU .....</b>	<b>5</b>
<b>4. OPERATION DECLARATION .....</b>	<b>5</b>
4.1 PREPARATION WORK .....	5
4.2 "HOME PAGE" INTERFACE FUNCTION SETTING .....	6
4.2.1 <i>Language selection</i> .....	6
4.2.2 <i>Serial port selection</i> .....	7
4.2.3 <i>Selection of communication parameters</i> .....	8
4.2.4 <i>Dip code address setting</i> .....	8
4.2.5 <i>Precautions</i> .....	10
4.3 "MONITORING" INTERFACE FUNCTION SETTING .....	11
4.3.1 <i>Parallel group display operation</i> .....	11
4.3.2 <i>Real-time data storage</i> .....	15
4.3.3 <i>Multi-pack data monitoring</i> .....	17
4.4 PARAMETERS INTERFACE FUNCTION SETTINGS .....	18
4.4.1 <i>Parameter reading</i> .....	19
4.4.2 <i>Parameter modification (the range of the parameter should be indicated)</i> .....	20
4.4.3 <i>Parameter export</i> .....	22
4.4.4 <i>Parameter import</i> .....	23
4.4.5 <i>Configure the default parameters of the upper monitor system</i> .....	24
4.4.6 <i>Current-limiting mode</i> .....	24
4.5 "CONFIGURATION" INTERFACE FUNCTION SETTING .....	25
4.5.1 <i>Modification of the battery capacity</i> .....	25
4.5.2 <i>Modification of battery strings</i> .....	27
4.5.3 <i>Forced dormancy function of upper monitor system</i> .....	27
4.5.4 <i>Function "Remote control"</i> .....	28
4.5.5 <i>Software upgrade</i> .....	29
4.5.6 <i>Anti-theft Settings</i> .....	33
4.5.7 <i>Write to the battery SN CODE</i> .....	37
4.5.8 <i>Opening and closing of the protection and alarm functions</i> .....	38
4.6 "STORAGE" INTERFACE FUNCTION SETTING .....	39
4.6.1 <i>Read and write for the system time</i> .....	39
4.6.2 <i>Reading of historical data</i> .....	40
4.6.3 <i>Conservation of historical data</i> .....	42
4.6.4 <i>Interval modification</i> .....	43
4.6.5 <i>The BMS inverter needs to be selected</i> .....	43
<b>5. PRECAUTIONS FOR USE .....</b>	<b>44</b>



IOS systems.

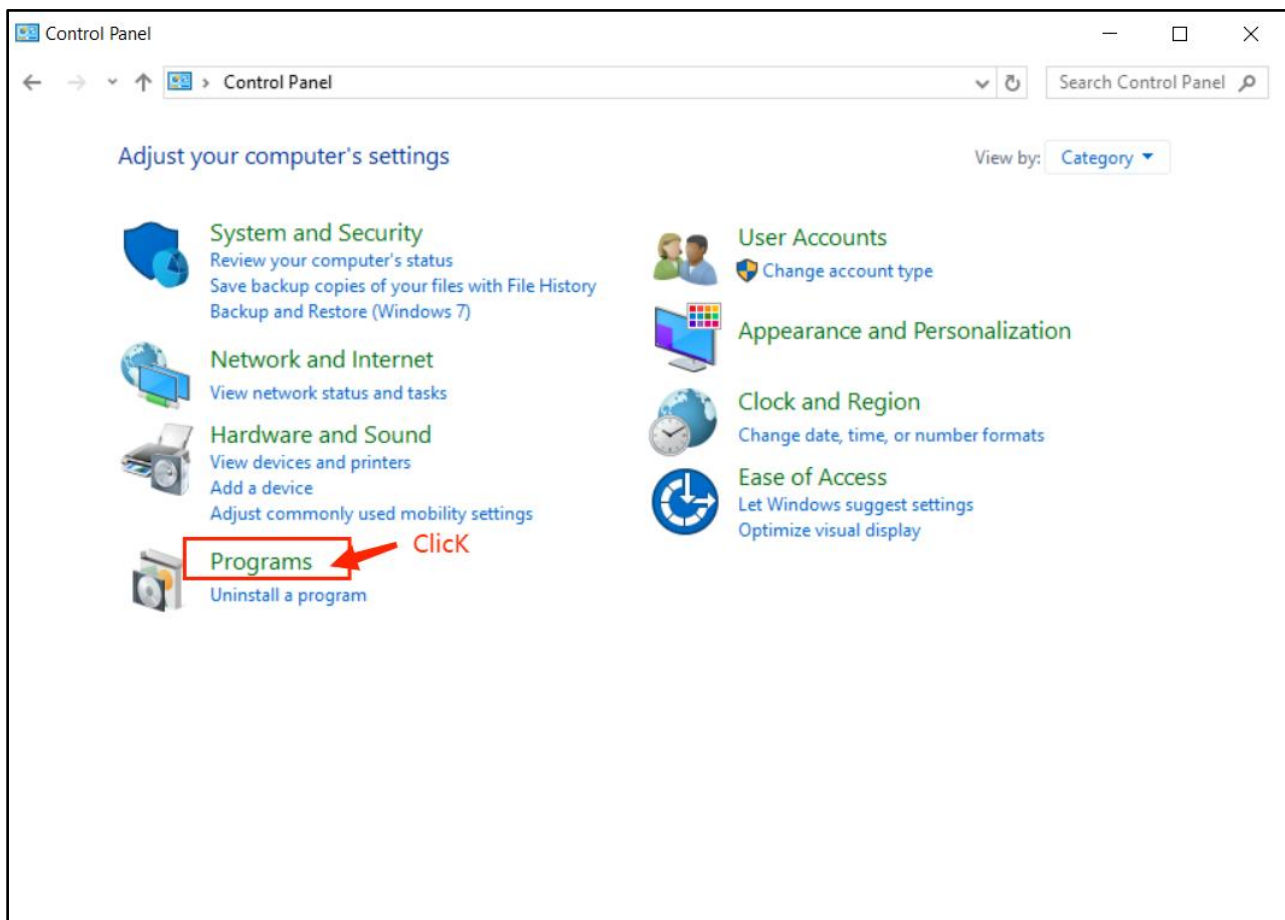
1. Windows XP :Windows XP: The system is intended to have the .NET 2.0 environment installed (you can contact Basengreen technicians for installation environment files) before running the upper monitor system software. (The .net2.0 is 22M).

2. Windows 7 : The system comes with the .net3.0 operating environment and can directly use the upper monitor system software.

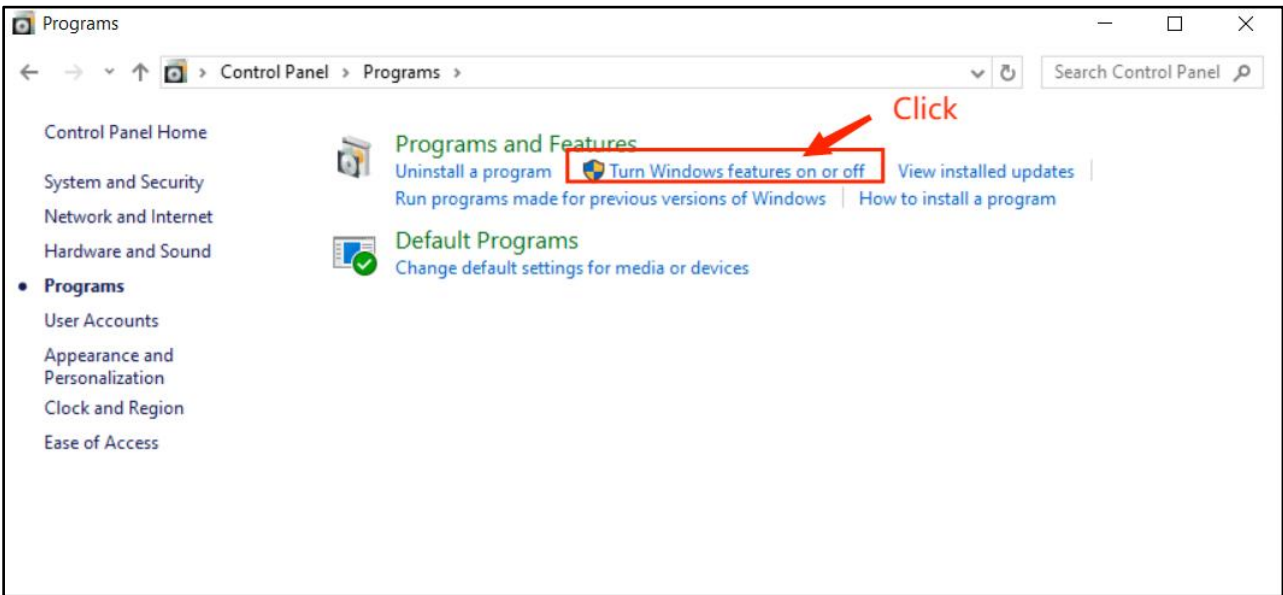
3. Windows 10 and Windows 11 systems are intended to have the .NET 3.5 environment installed before running the upper monitor system software. (. Net 3.5 The installation environment is 80M) There are two ways to obtain the installation environment files, one can contact Basengreen technicians , another way is to enable the system's own .net runtime environment.

Taking Windows 11 system as an example, the steps to enable the system's built-in .net runtime environment are as follows:

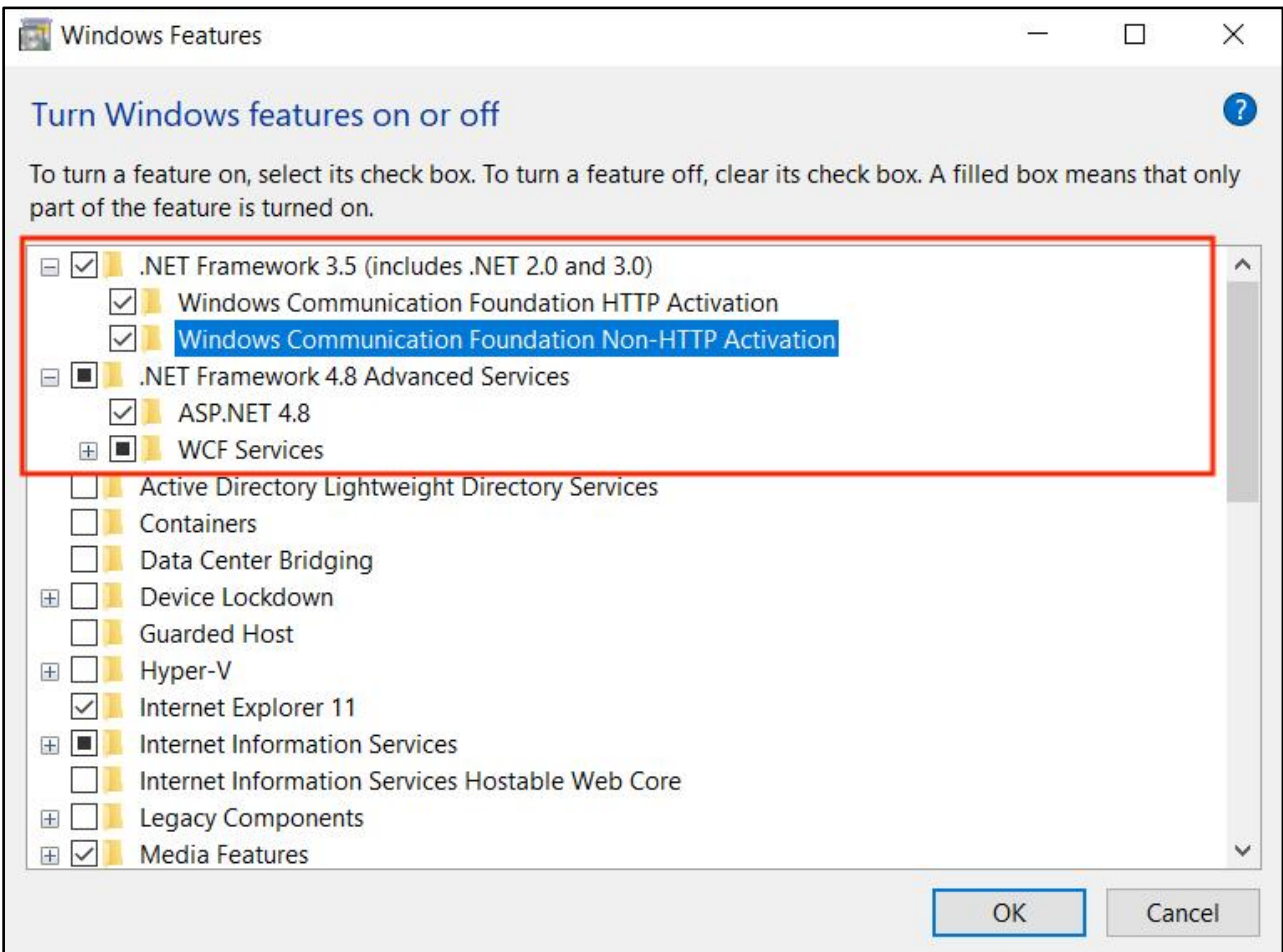
(1) Search for the "Control Panel" in the start menu of the Win 11 system, open the "Control panel" in the search, and select the "Programs" option inside.



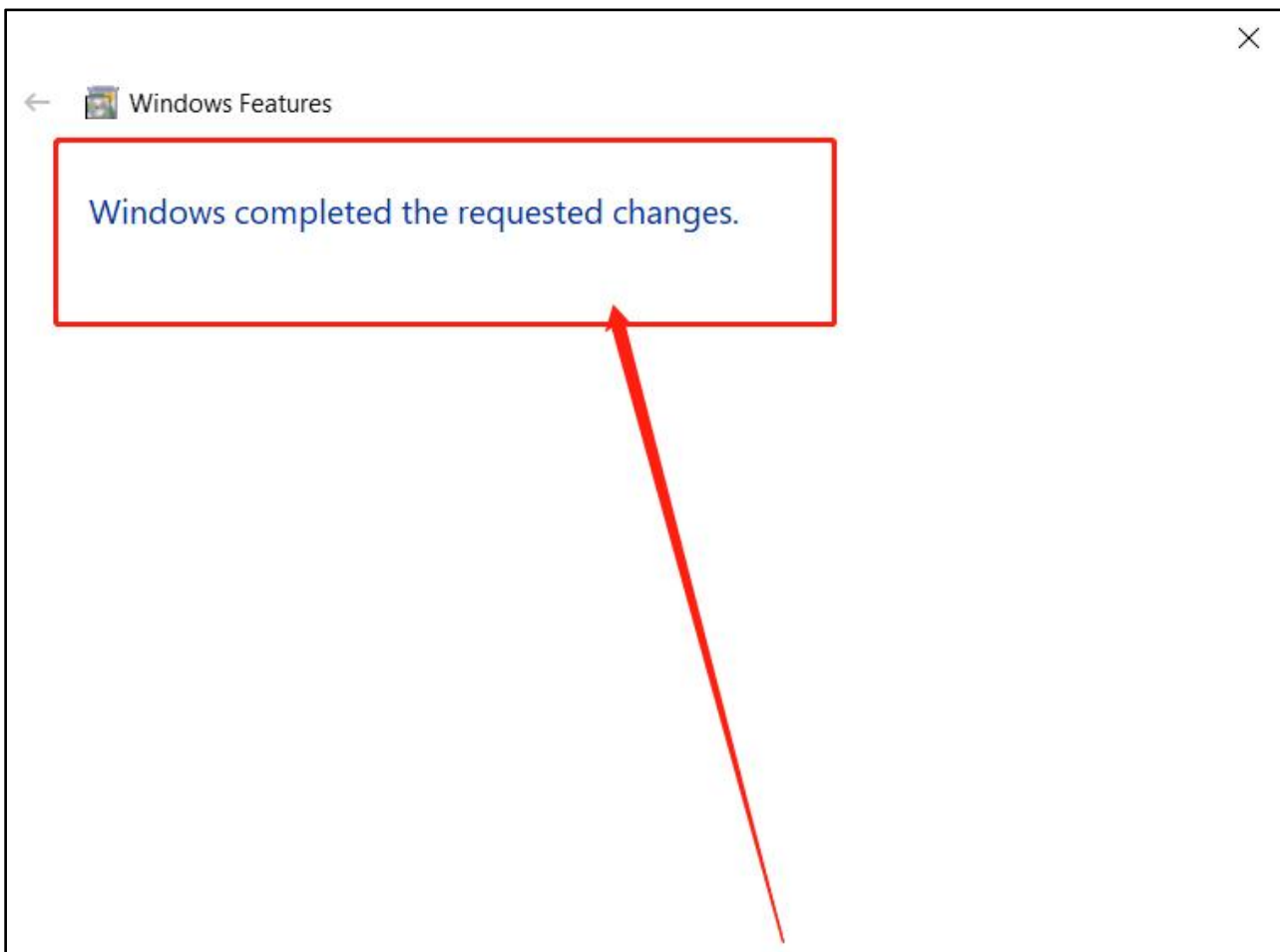
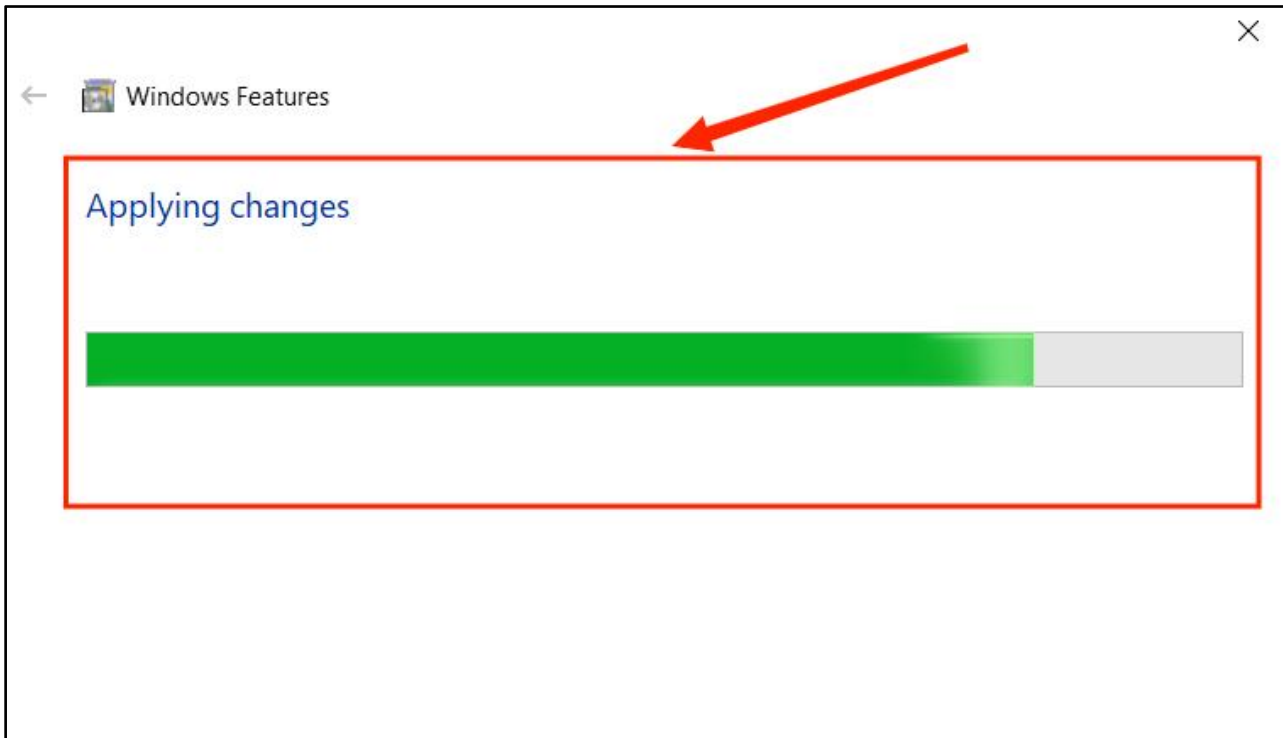
(2) In the "Programs and Features" window, click the "Turn Windows features on or off " option.



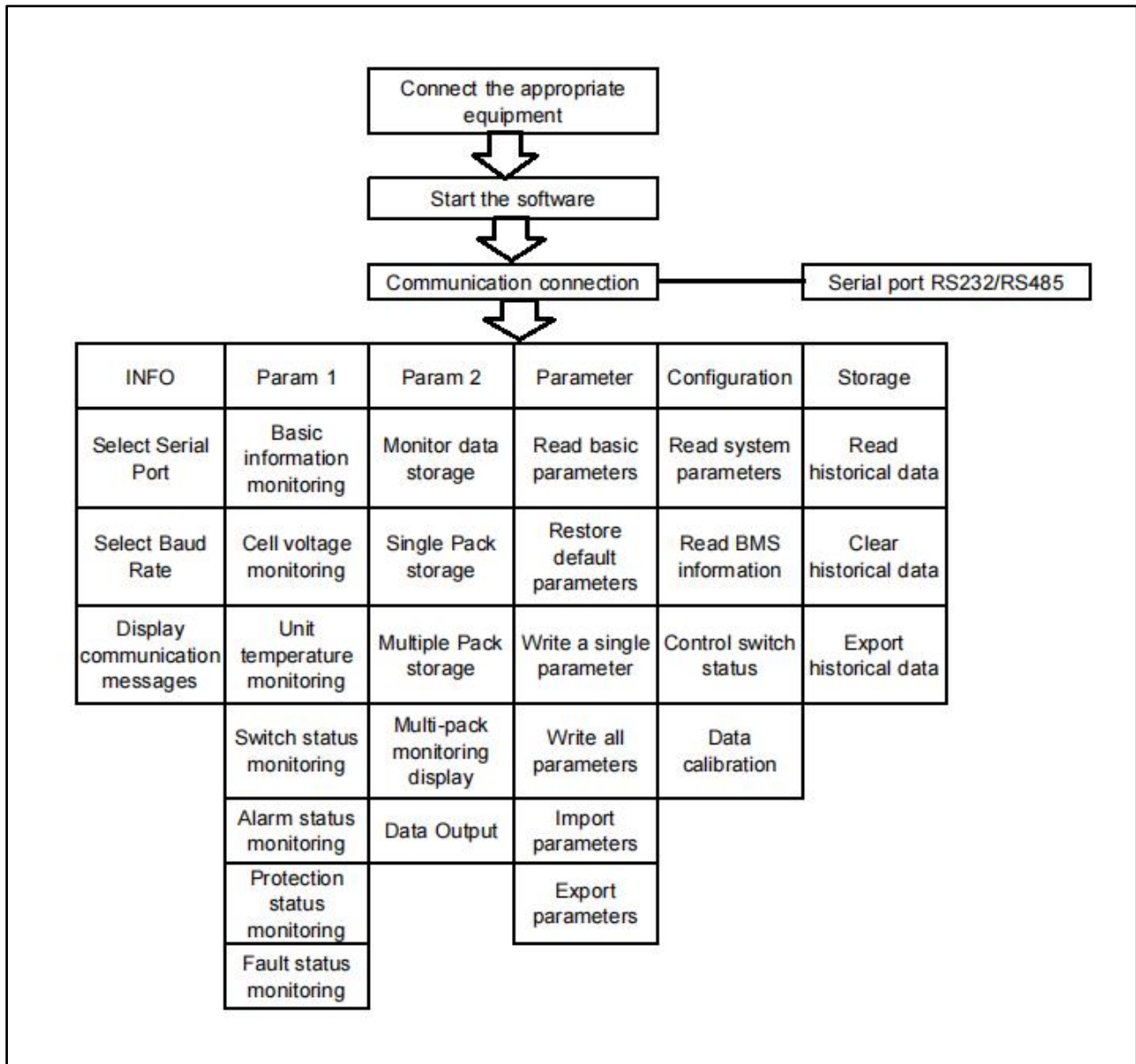
(3) After entering, check all. For the net service file, click on the "OK" button.



(4) Wait for the Win 11 system to automatically install and update, and then restart the computer.



### 3. MENU



### 4. OPERATION DECLARATION

The software is a clear and simple, with real-time monitoring, real-time data storage, management strategy, system Settings, historical data reading and other functions. In addition, multiple PACKS connection can be connected in parallel for data reading and storage.

#### 4.1 Preparation work

Preliminary required before opening the upper monitor system to communicate with the BMS:

- (1) Prepare a serial port converter from USB to RS485 / RS232;
- (2) Install the corresponding USB serial port driver on the computer;

(3) Prepare communication line according to the definition of communication line in the specification.

## 4.2 "Home page" interface function setting

### 4.2.1 Language selection

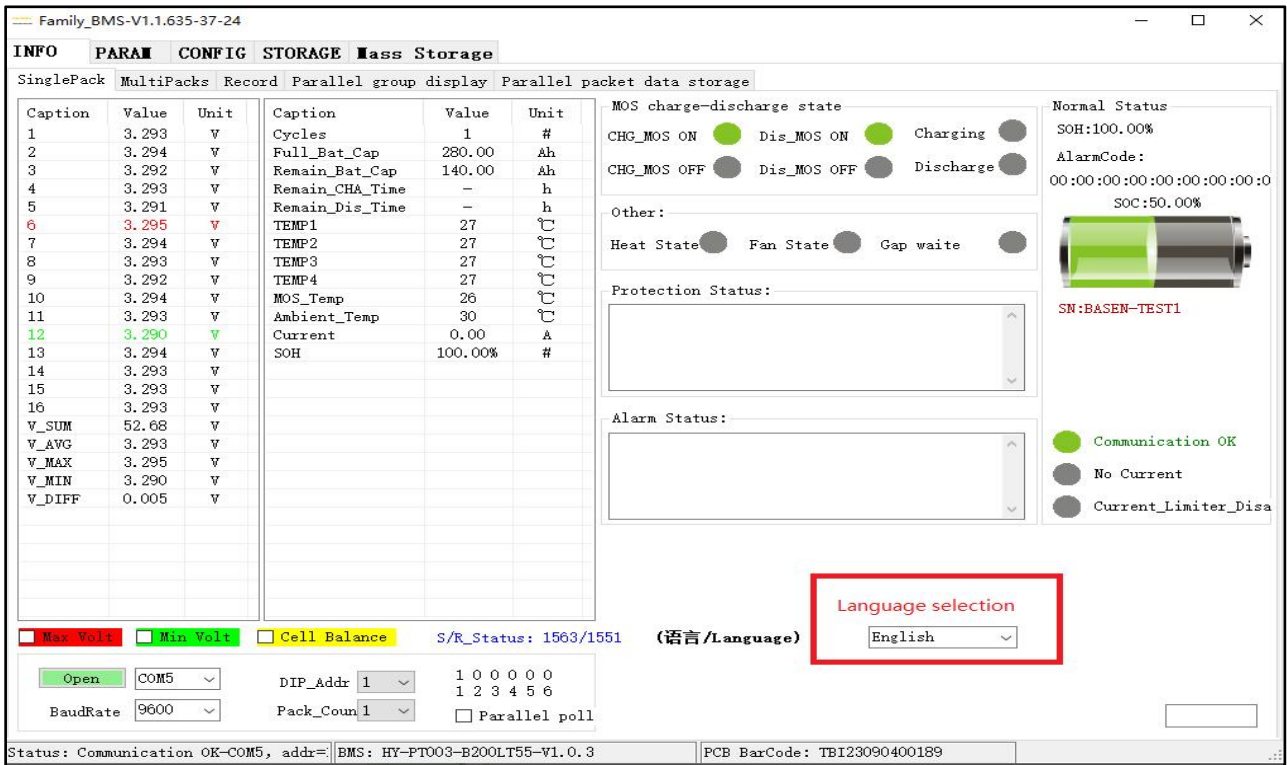
The computer software can choose the language of "Chinese" or "English", the specific operation is shown in the figure1 and 2.

( Figure1: Upon entering the page, the Chinese interface shown below will be displayed.)



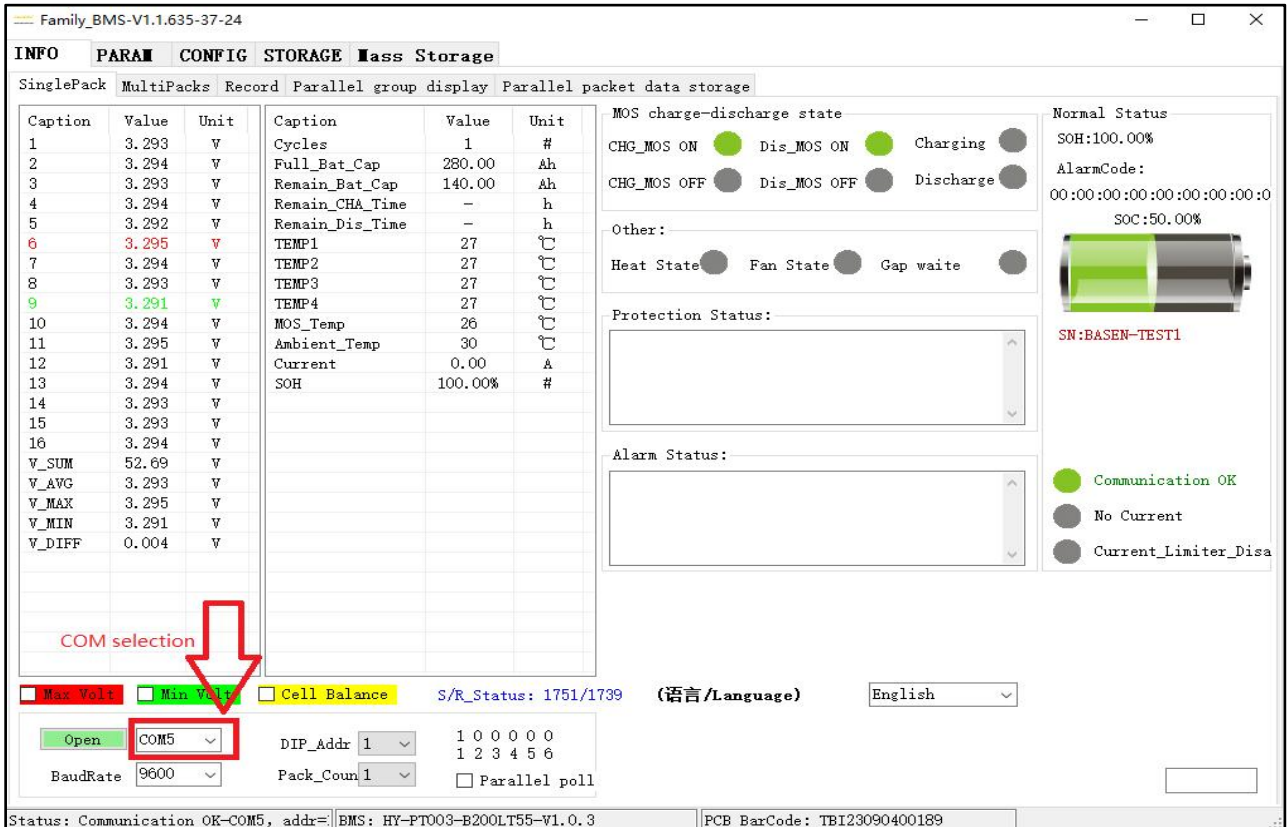
( Figure2: After changing the language to English, the English interface shown below will be displayed.)





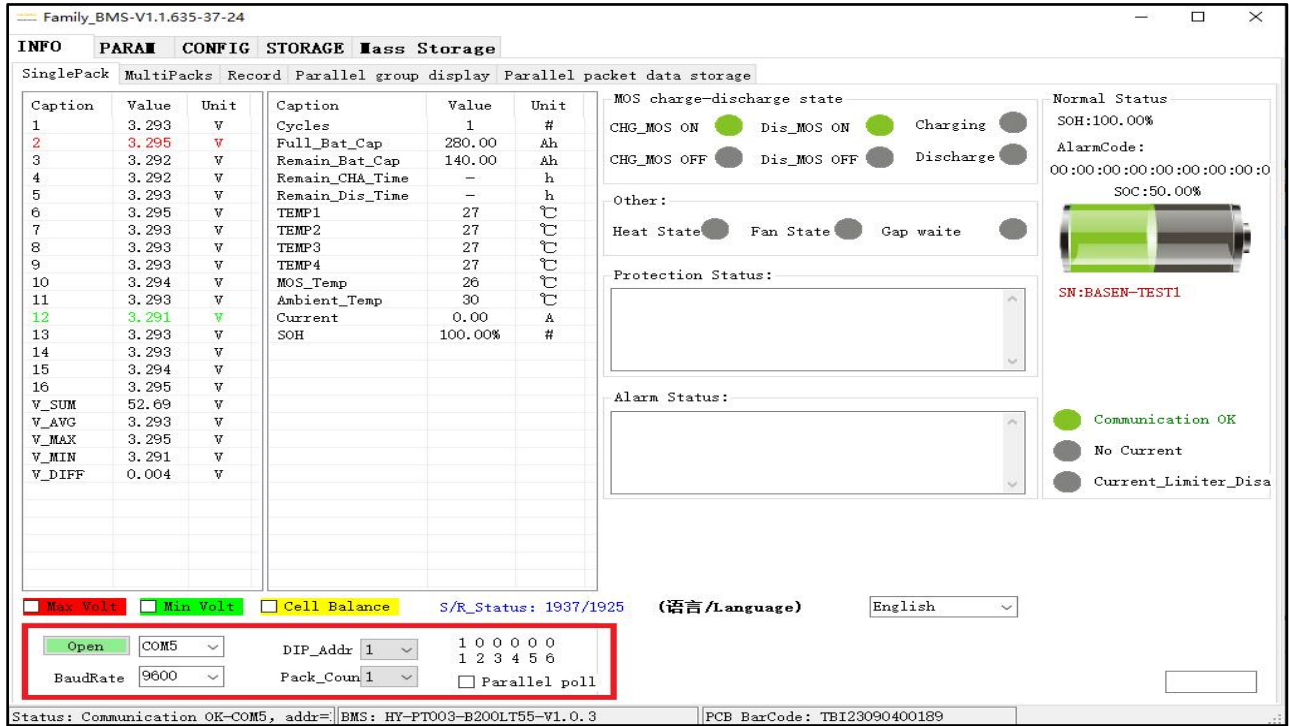
### 4.2.2 Serial port selection

After the BMS connection is successful, a new serial port will be added. Select a new serial port. The specific operation is as shown in the figure. For the serial port, you can check on your computer setting.



### 4.2.3 Selection of communication parameters













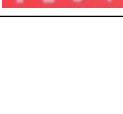
The selection of communication parameters includes the selection of Baud rate, data bit, stop bit, parity, and wave rate according to the requirements of the specification. The specific operation is shown in figure.

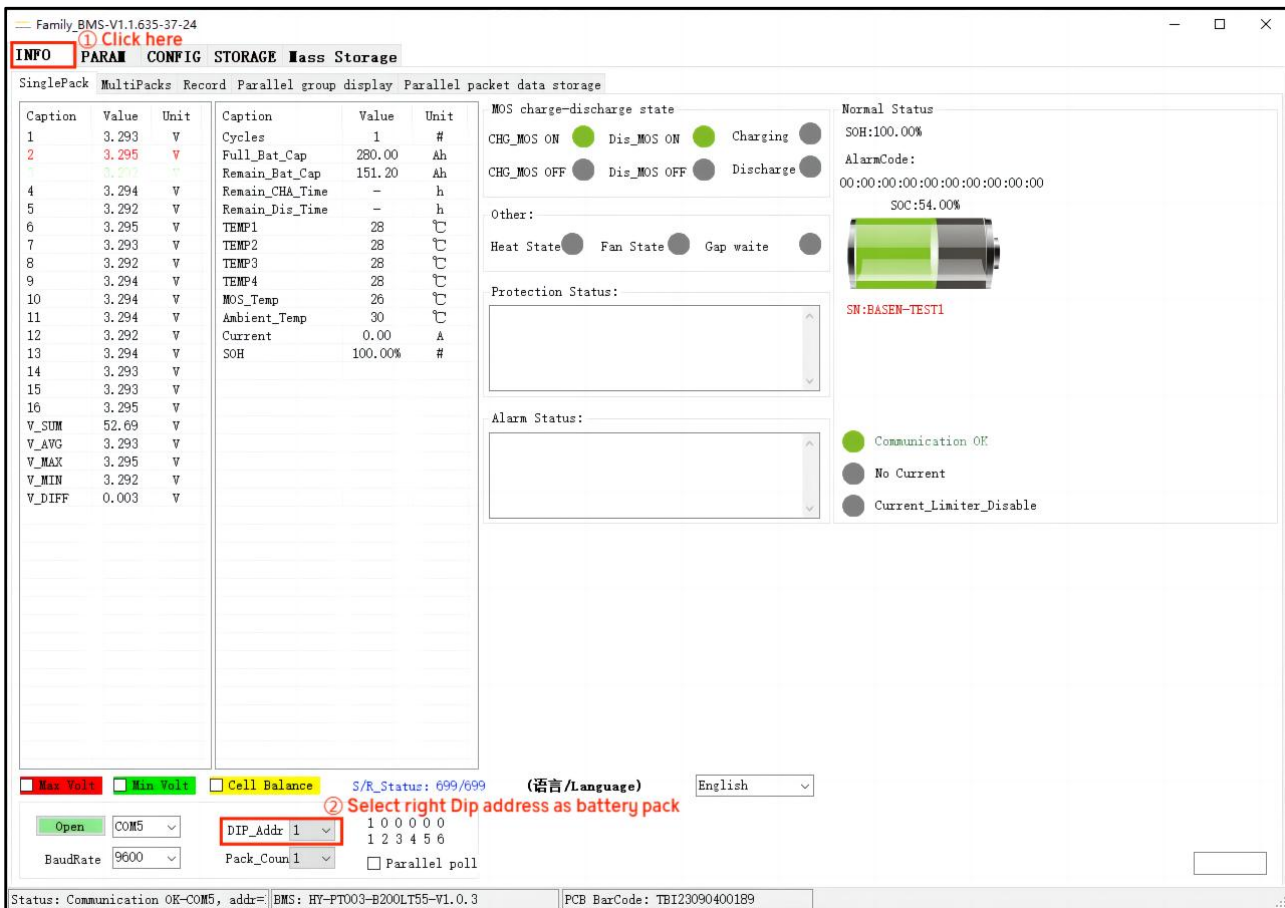


### 4.2.4 Dip code address setting

Code address 1 is defined as (black point is OFF state, blank is ON state, the same below), address 2 , other addresses and so on. It should be noted that the dip address on the BMS should be consistent with the dial address of the upper machine. Since there are many kinds of BMS boards in our company, please refer to the corresponding BMS specification.

address	Dial switch position				Example of in-kind dial	
	Battery#	#1	#2	#3		#4
1	1	ON	OFF	OFF	OFF	
2	2	OFF	ON	OFF	OFF	

3	ON	ON	OFF	OFF	
4	OFF	OFF	ON	OFF	
5	ON	OFF	ON	OFF	
6	OFF	ON	ON	OFF	
7	ON	ON	ON	OFF	
8	OFF	OFF	OFF	ON	
9	ON	OFF	OFF	ON	
10	OFF	ON	OFF	ON	
11	ON	ON	OFF	ON	
12	OFF	OFF	ON	ON	
13	ON	OFF	ON	ON	
14	OFF	ON	ON	ON	
15	ON	ON	ON	ON	



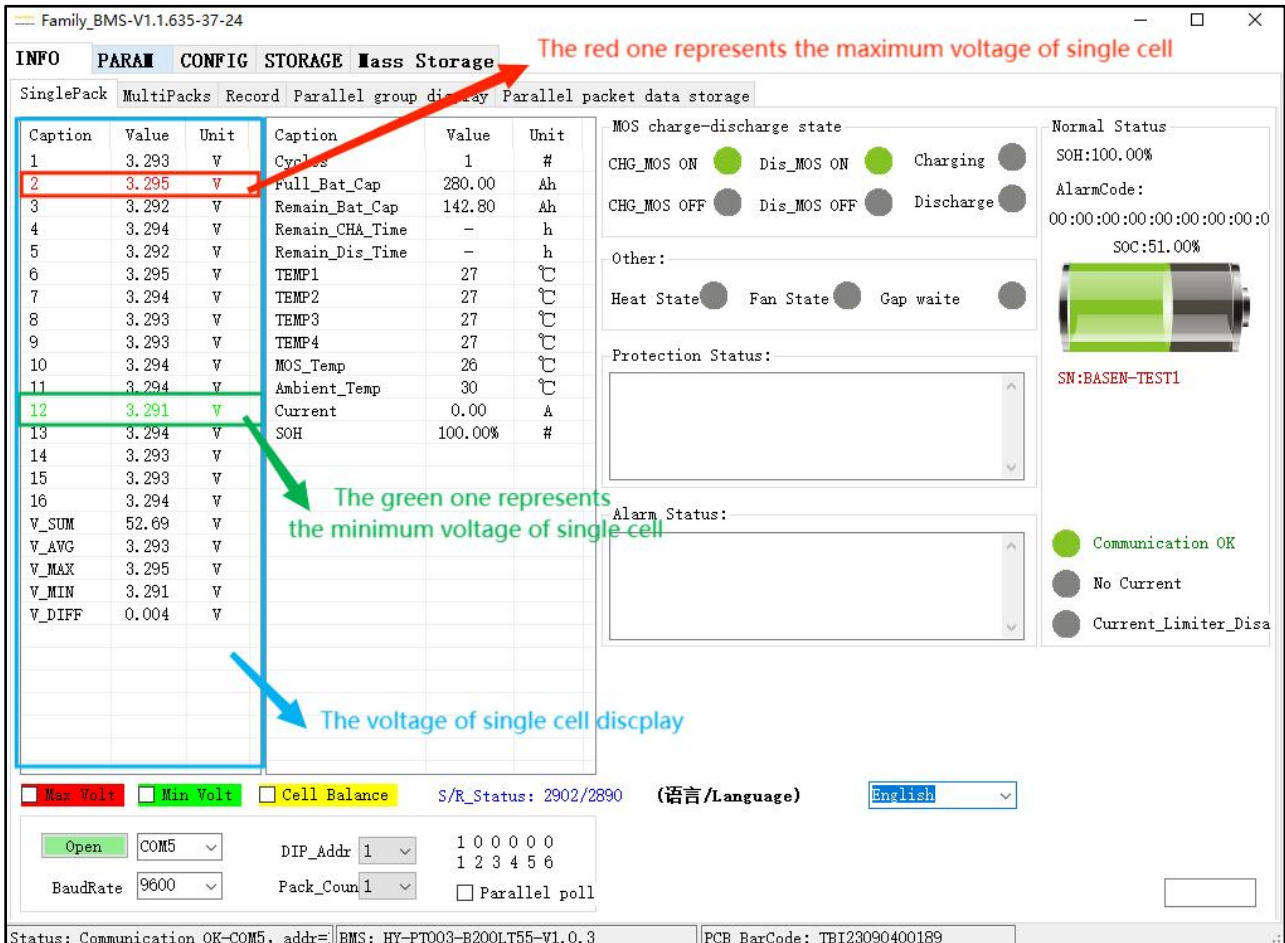
#### 4.2.5 Precautions

If the communication fails, the following aspects:

- ① Pay attention to the definition of communication line in the specification and check whether the communication line is correct;
- ② Check whether the selection of the Baud rate is consistent with the requirements of the specification;
- ③ Confirm the battery pack address before using the software, and select the corresponding address on the software for monitoring;
- ④ Check whether the communication serial port line can be used normally;
- ⑤ Generally, computers with a USB serial port driver should self-identify; if not, install the corresponding USB serial port driver;
- ⑥ The running platform of this software is .net, if the computer operating system is Windows XP or lower system, install .net environment first, the minimum version is .net2.0 or above. Windows 7 system comes with a built-in .net environment, and the Windows 10 and Windows 11 systems need to install the .net3.5 operating environment.

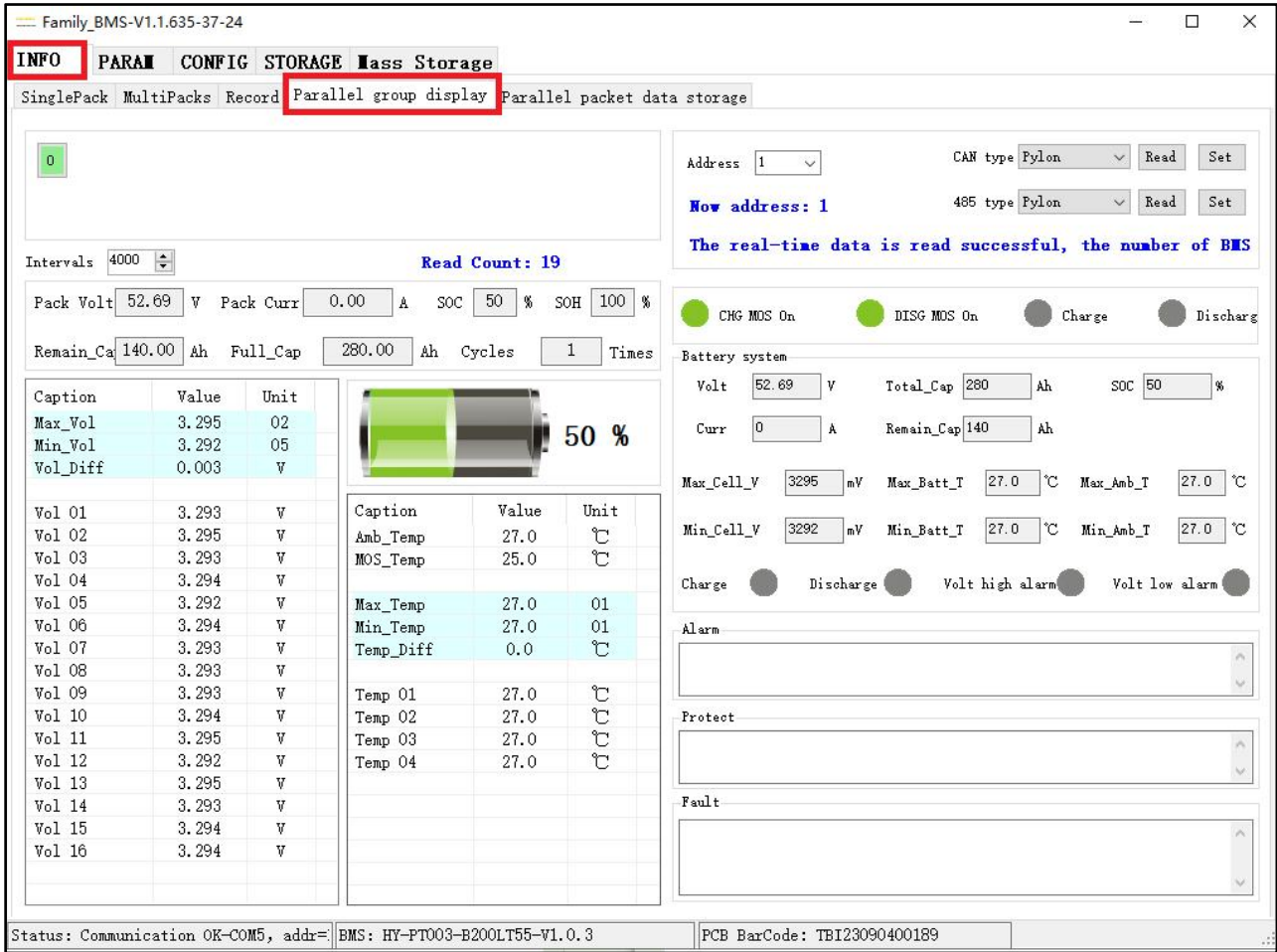
### 4.3 "MONITORING" INTERFACE FUNCTION SETTING

Select the corresponding serial port, click to start monitoring, and read the real-time data information of the BMS. The information includes voltage, temperature, switching status, alarm status, protection status, fault status, etc., as shown in the figure below.



#### 4.3.1 Parallel group display operation

In the parallel state, open the "INFO" page and select the "parallel group display". The specific operation is shown in the figure.



(1) Single group of information viewing

When the communication is normal, opening the "INFO" can observe the "Single Pack" interface, and the data information of each BMS will be displayed in turn. Taking two groups as an example, the "Single Pack" interface will display the following information in turn.

Family\_BMS-V1.1.635-37-24

INFO PARAM CONFIG STORAGE **Mass Storage**

SinglePack MultiPacks Record Parallel group display Parallel packet data storage

Caption	Value	Unit	Caption	Value	Unit
1	3.293	V	Cycles	1	#
2	3.295	V	Full_Bat_Cap	280.00	Ah
3	3.292	V	Remain_Bat_Cap	142.80	Ah
4	3.294	V	Remain_CHA_Time	-	h
5	3.292	V	Remain_Dis_Time	-	h
6	3.295	V	TEMP1	27	℃
7	3.294	V	TEMP2	27	℃
8	3.293	V	TEMP3	27	℃
9	3.293	V	TEMP4	27	℃
10	3.294	V	MOS_Temp	26	℃
11	3.294	V	Ambient_Temp	30	℃
12	3.291	V	Current	0.00	A
13	3.294	V	SOH	100.00%	#
14	3.293	V			
15	3.293	V			
16	3.294	V			
V_SUM	52.69	V			
V_AVG	3.293	V			
V_MAX	3.295	V			
V_MIN	3.291	V			
V_DIFF	0.004	V			


MOS charge-discharge state  
 CHG\_MOS ON  Dis\_MOS ON  Charging   
 CHG\_MOS OFF  Dis\_MOS OFF  Discharge

Other:  
 Heat State  Fan State  Gap waite

Protection Status:

Alarm Status:

Normal Status  
 SOH:100.00%  
 AlarmCode:  
 00:00:00:00:00:00:00:00:00  
 SOC:51.00%



SN:BASEN-TEST1

Communication OK   
 No Current   
 Current\_Limiter\_Disa

Max Volt  Min Volt  Cell Balance S/R\_Status: 2902/2890 (语言/Language) English

Open COM5 DIP\_Addr 1 1 0 0 0 0  
 1 2 3 4 5 6  
 BaudRate 9600 Pack\_Count 1  Parallel poll

Status: Communication OK-COM5, addr=BMS: HY-PT003-E200LT55-V1.0.3 PCB BarCode: TBI23090400189

Family\_BMS-V1.1.635-37-24

INFO PARAM CONFIG STORAGE **Mass Storage**

SinglePack MultiPacks Record Parallel group display Parallel packet data storage

Caption	Value	Unit	Caption	Value	Unit
1	3.293	V	Cycles	1	#
2	3.294	V	Full_Bat_Cap	280.00	Ah
3	3.292	V	Remain_Bat_Cap	151.20	Ah
4	3.294	V	Remain_CHA_Time	-	h
5	3.292	V	Remain_Dis_Time	-	h
6	3.295	V	TEMP1	28	℃
7	3.293	V	TEMP2	28	℃
8	3.293	V	TEMP3	28	℃
9	3.292	V	TEMP4	28	℃
10	3.294	V	MOS_Temp	26	℃
11	3.293	V	Ambient_Temp	31	℃
12	3.291	V	Current	0.00	A
13	3.294	V	SOH	100.00%	#
14	3.293	V			
15	3.294	V			
16	3.294	V			
V_SUM	52.69	V			
V_AVG	3.293	V			
V_MAX	3.295	V			
V_MIN	3.291	V			
V_DIFF	0.004	V			


MOS charge-discharge state  
 CHG\_MOS ON  Dis\_MOS ON  Charging   
 CHG\_MOS OFF  Dis\_MOS OFF  Discharge

Other:  
 Heat State  Fan State  Gap waite

Protection Status:

Alarm Status:

Normal Status  
 SOH:100.00%  
 AlarmCode:  
 00:00:00:00:00:00:00:00:00  
 SOC:54.00%



SN:BASEN-TEST1

Communication OK   
 No Current   
 Current\_Limiter\_Disable

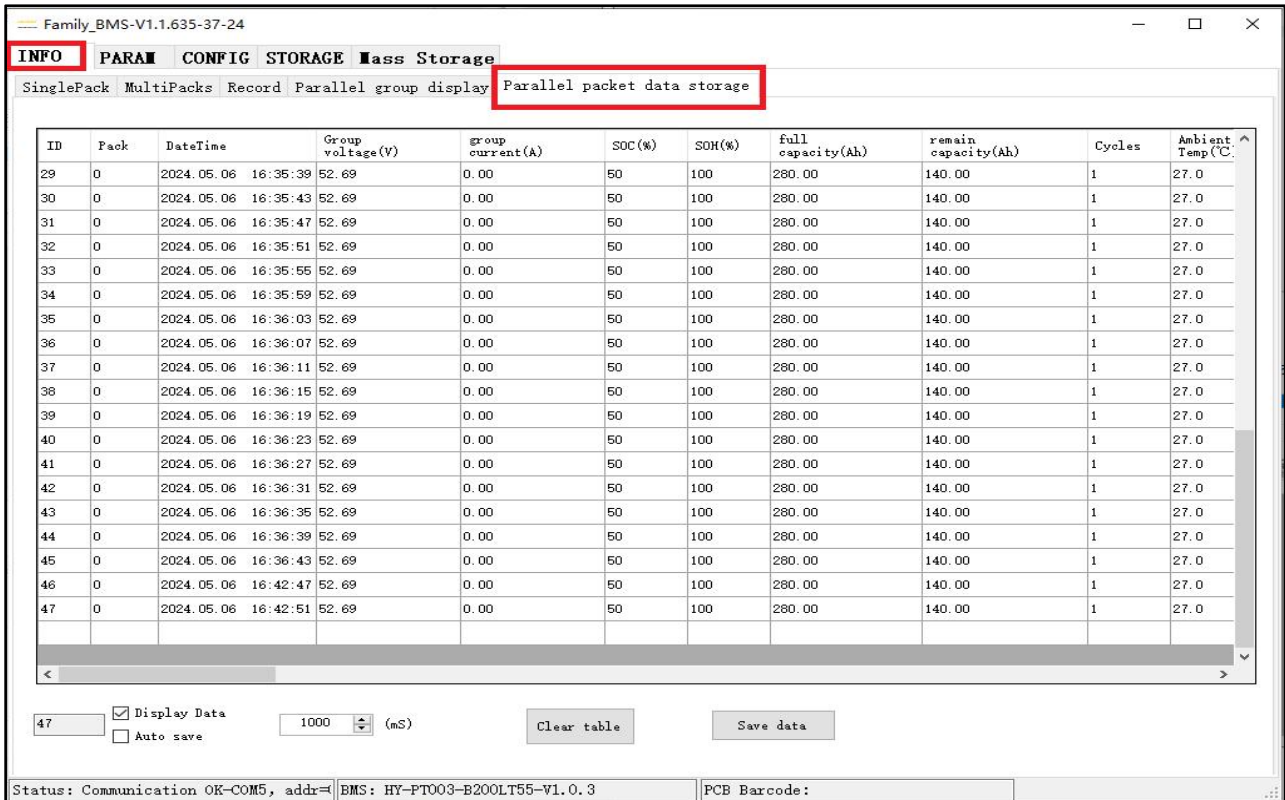
Max Volt  Min Volt  Cell Balance S/R\_Status: 13/7 (语言/Language) English

Open COM5 DIP\_Addr 2 0 1 0 0 0  
 1 2 3 4 5 6  
 BaudRate 9600 Pack\_Count 1  Parallel poll

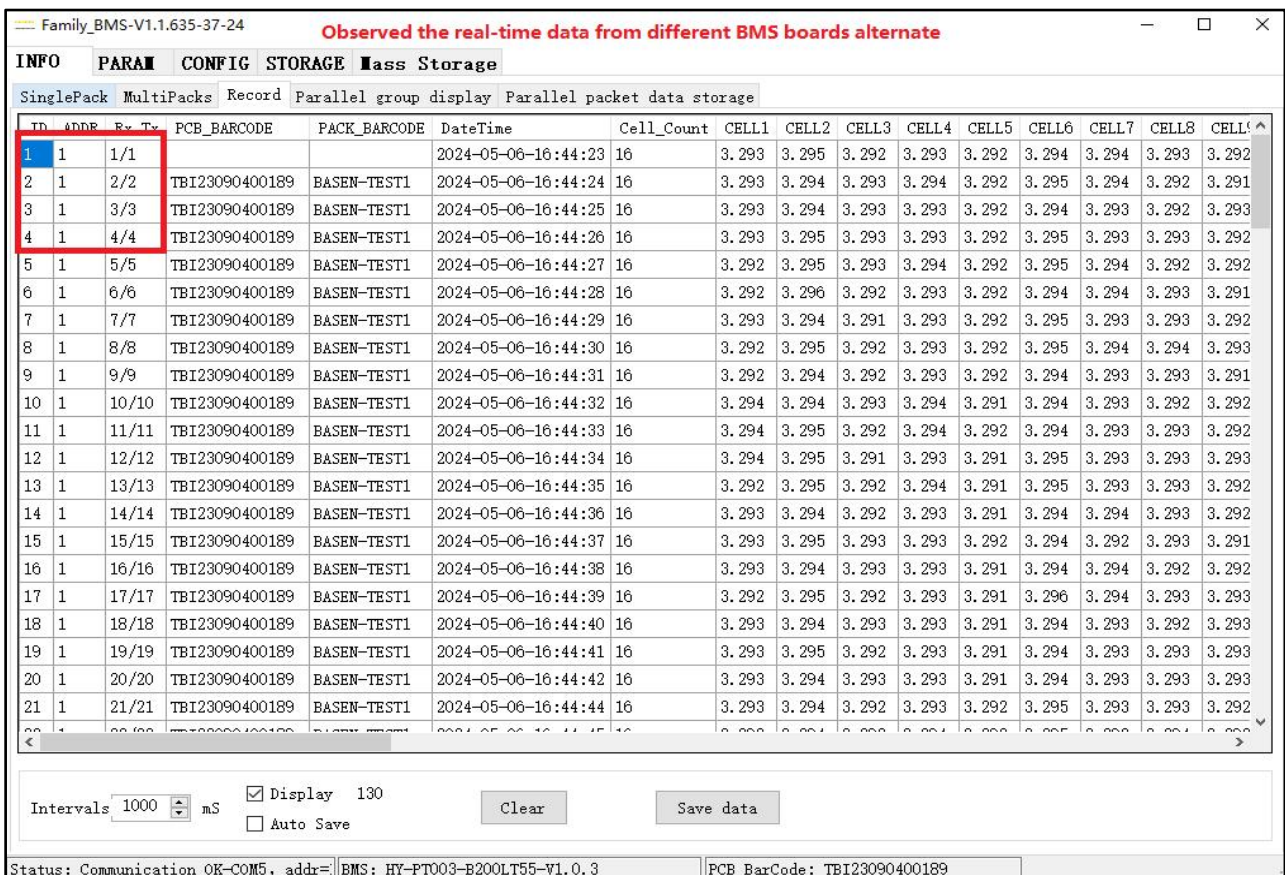
Status: Communication OK-COM5, addr=BMS: HY-PT003-E200LT55-V1.0.3 PCB BarCode: TBI23090400189

### (2) Multiple groups of information viewing

Opening the "Parallel packet data storage" interface will display the data for each battery pack.

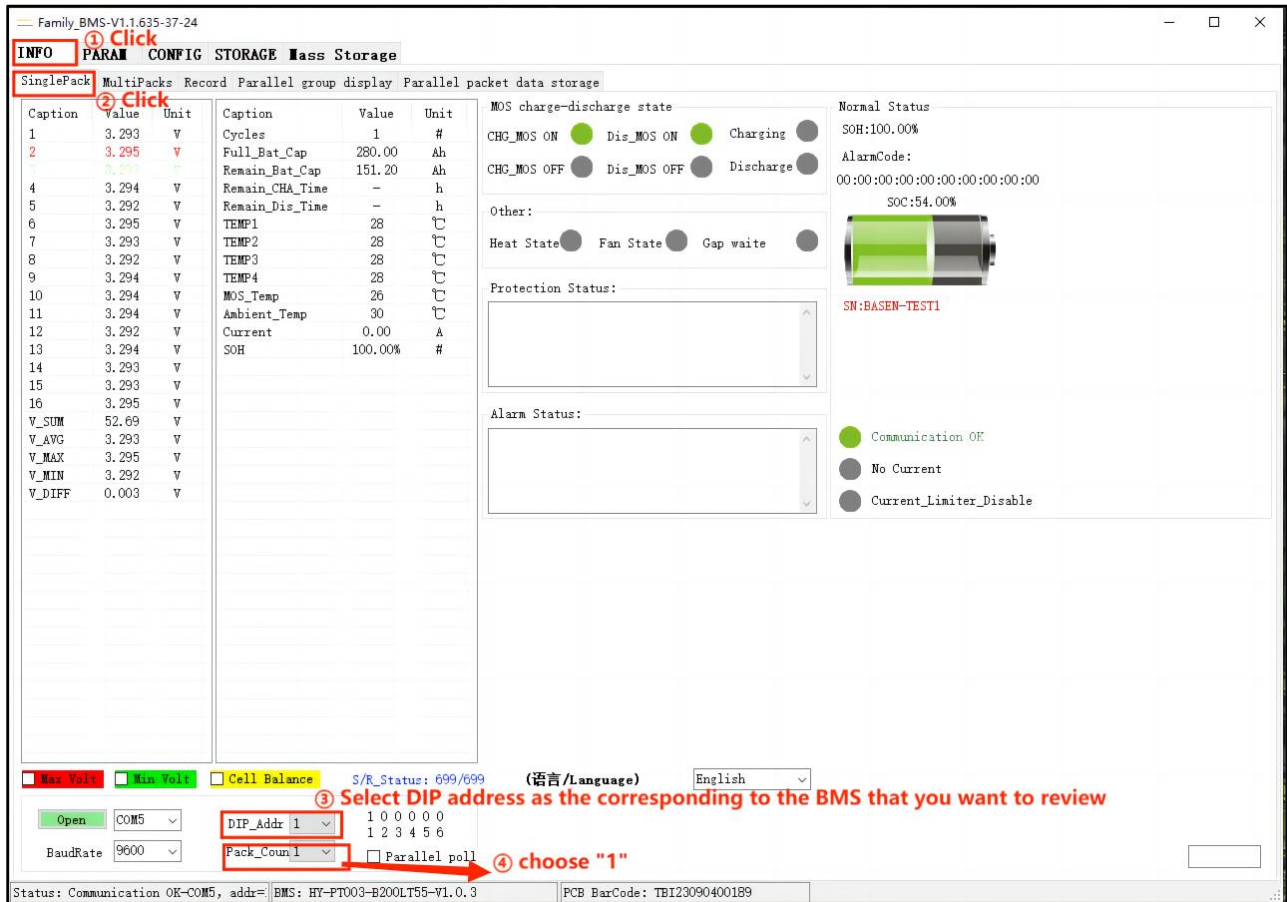


### (3) Viewing real-time data





(5) If you only want to view the data of one BMS after the connection of several battery packs, change the pack number of the "INFO" interface to 1, and the address is selected as the corresponding address of the BMS to be viewed. The specific operation is shown in the figure.

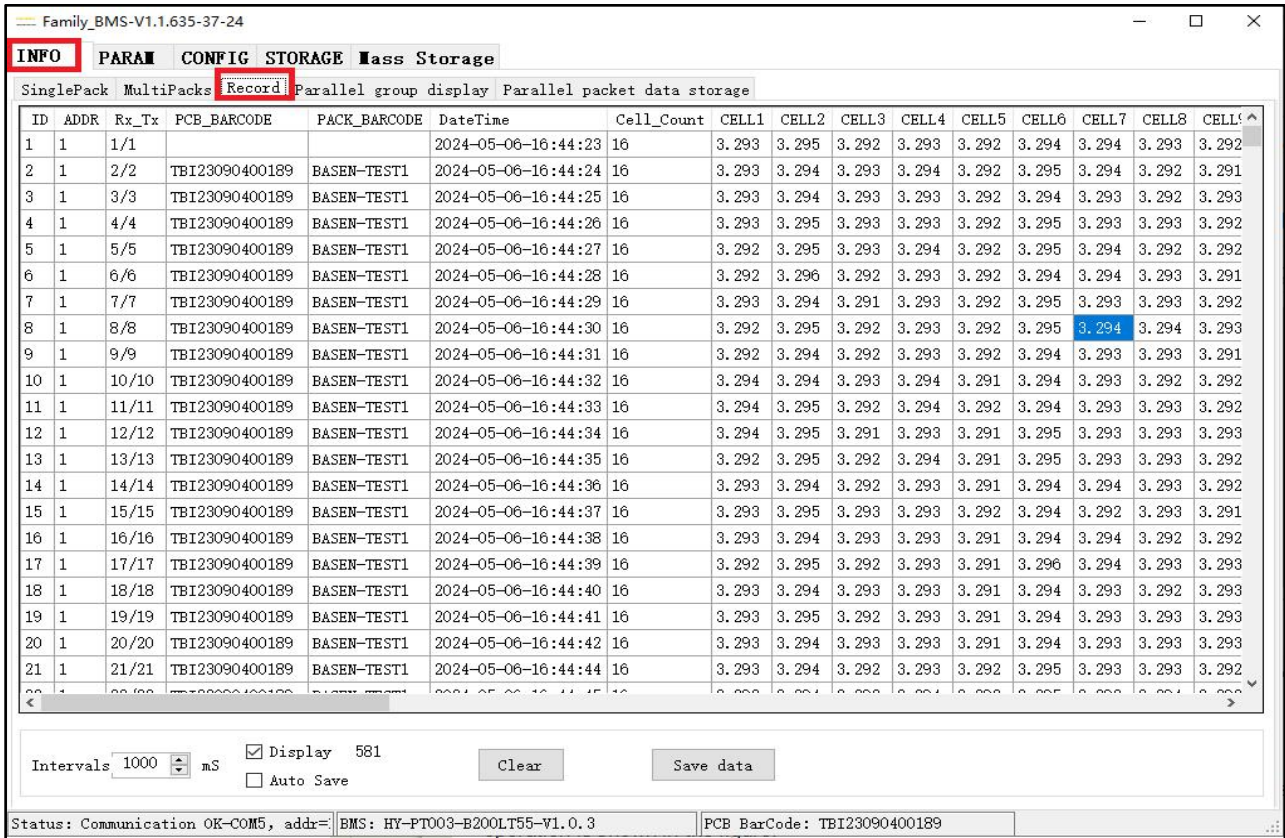


Note: USB serial port has RS232 and RS485, multi-pack monitoring must be connected to RS485, and each pack address cannot be the same.

### 4.3.2 Real-time data storage

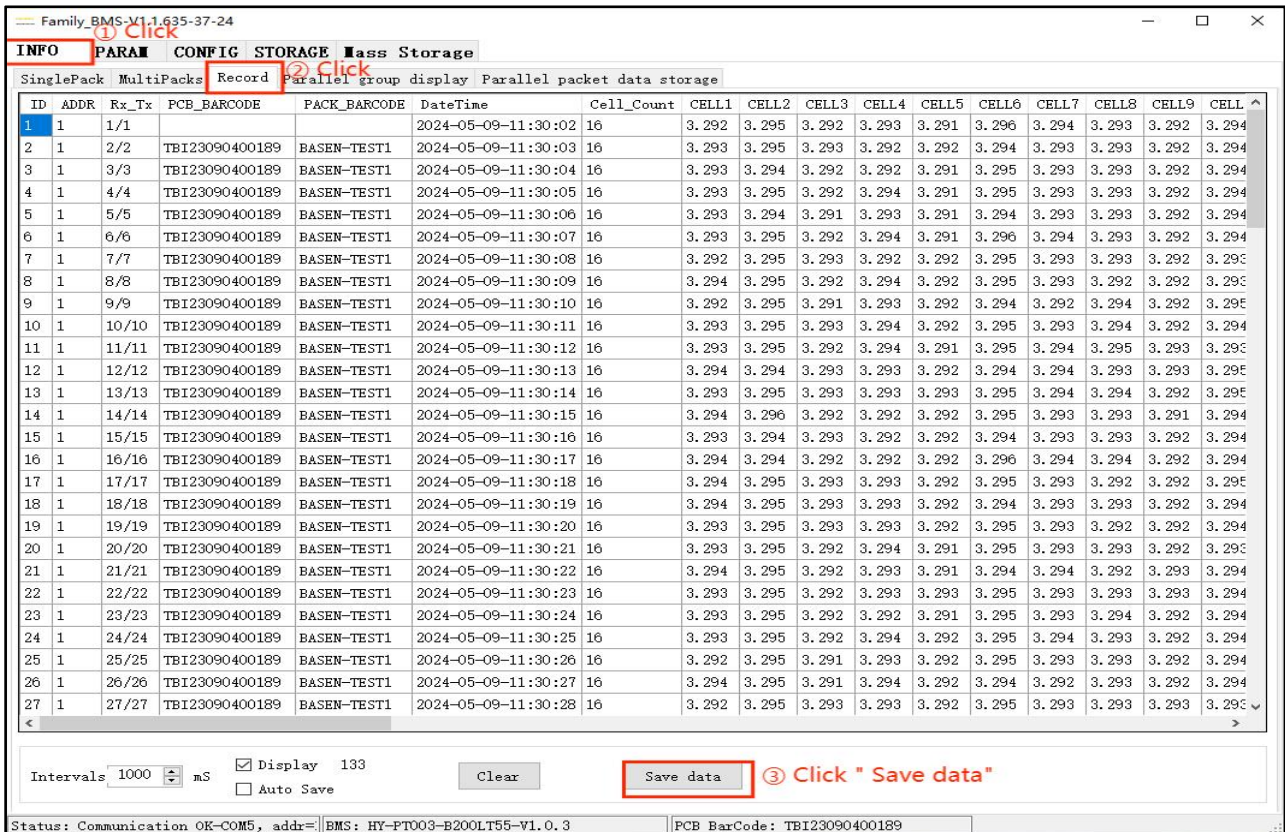
#### (1) View of real-time data

View the real-time data and enter the "Record" interface in the "INFO" interface. The specific operation is shown in the figure.



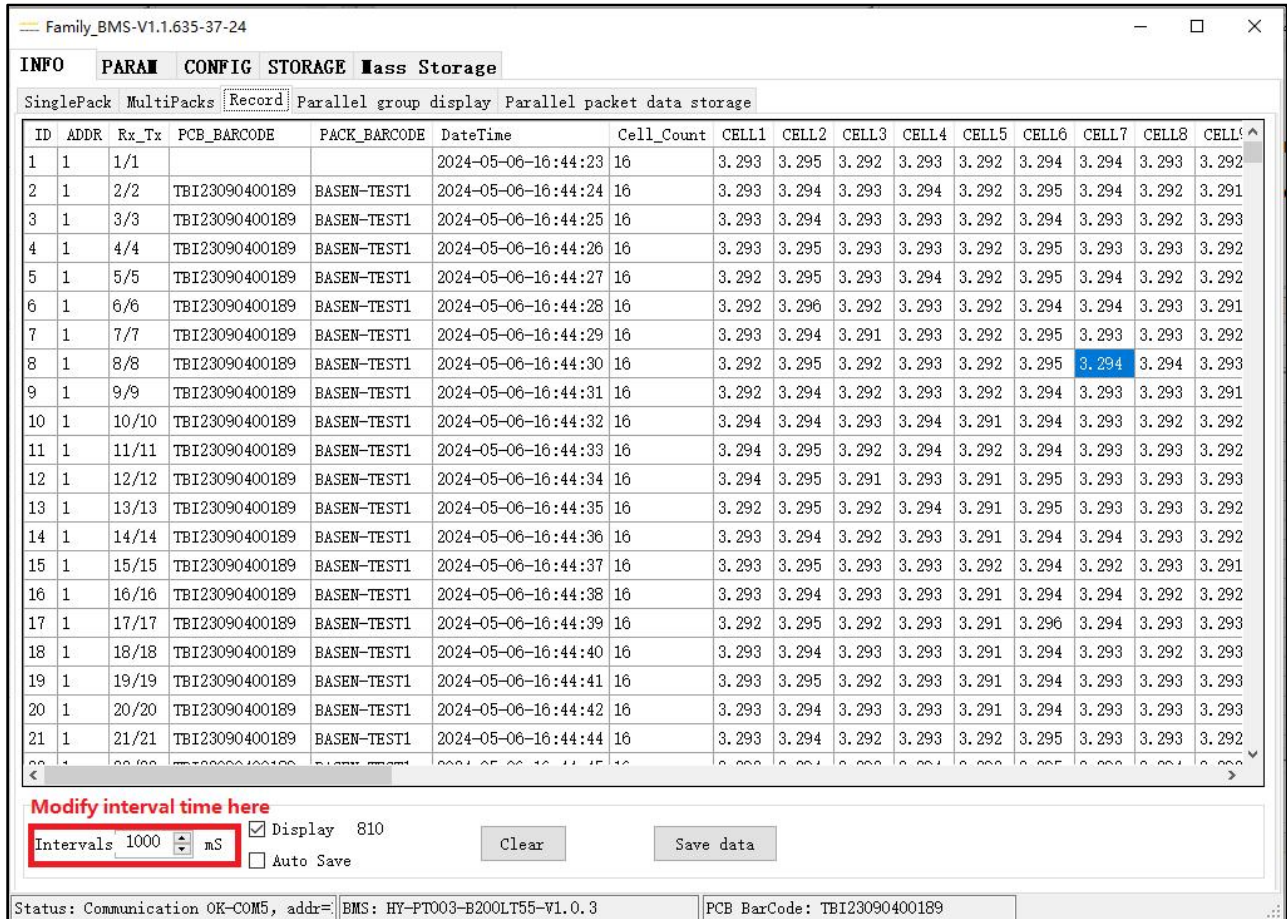
(2) Export of real-time data

Real-time data can be exported into a EXCEL table data format, click "Save data", the specific operation is shown in the figure.



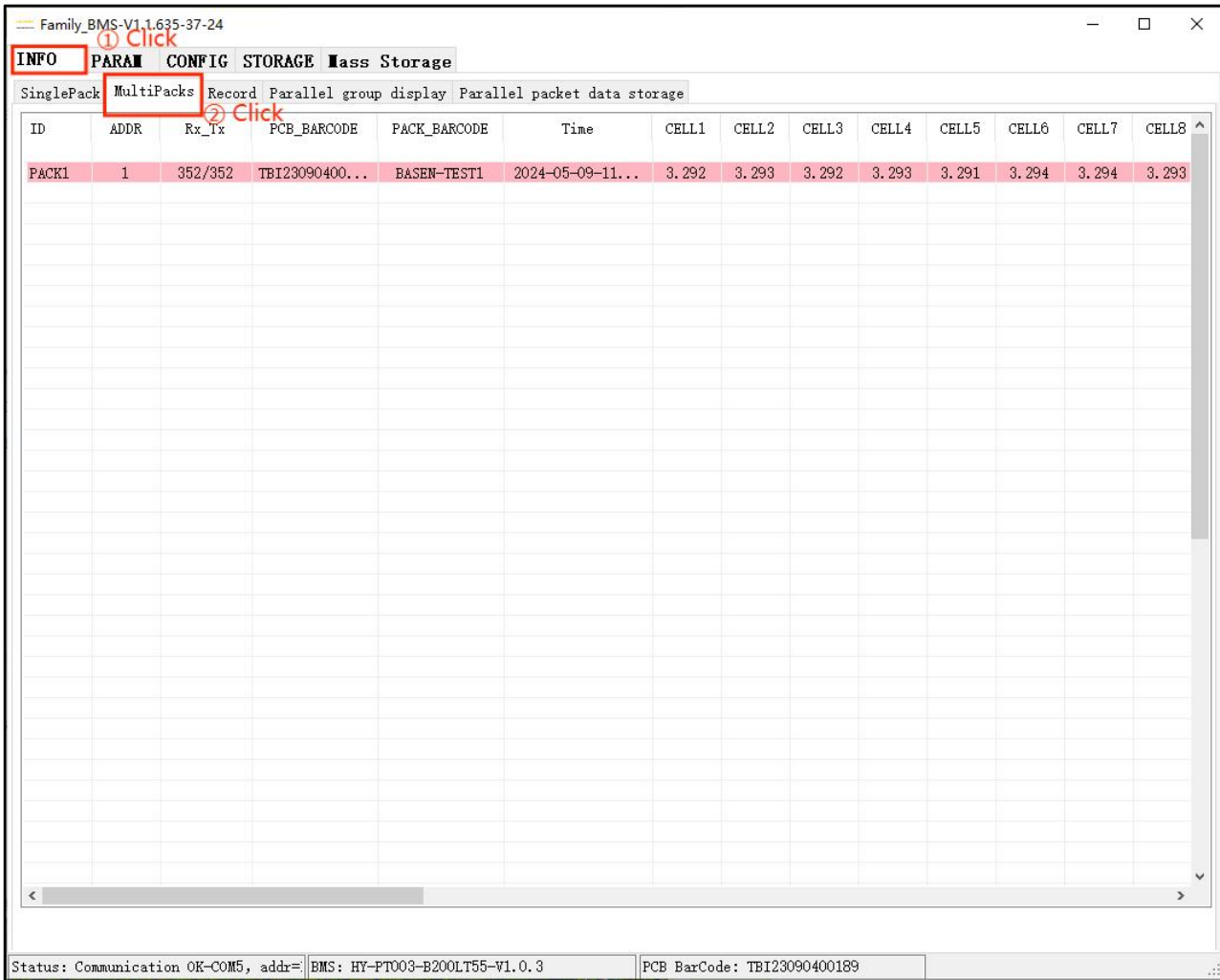
### (3) Modification interval time

The real-time data storage interval can be defined by ourselves. The default real-time data recording interval is 1 second / record. If the real-time data recording interval is modified, the specific operation is shown in the figure.



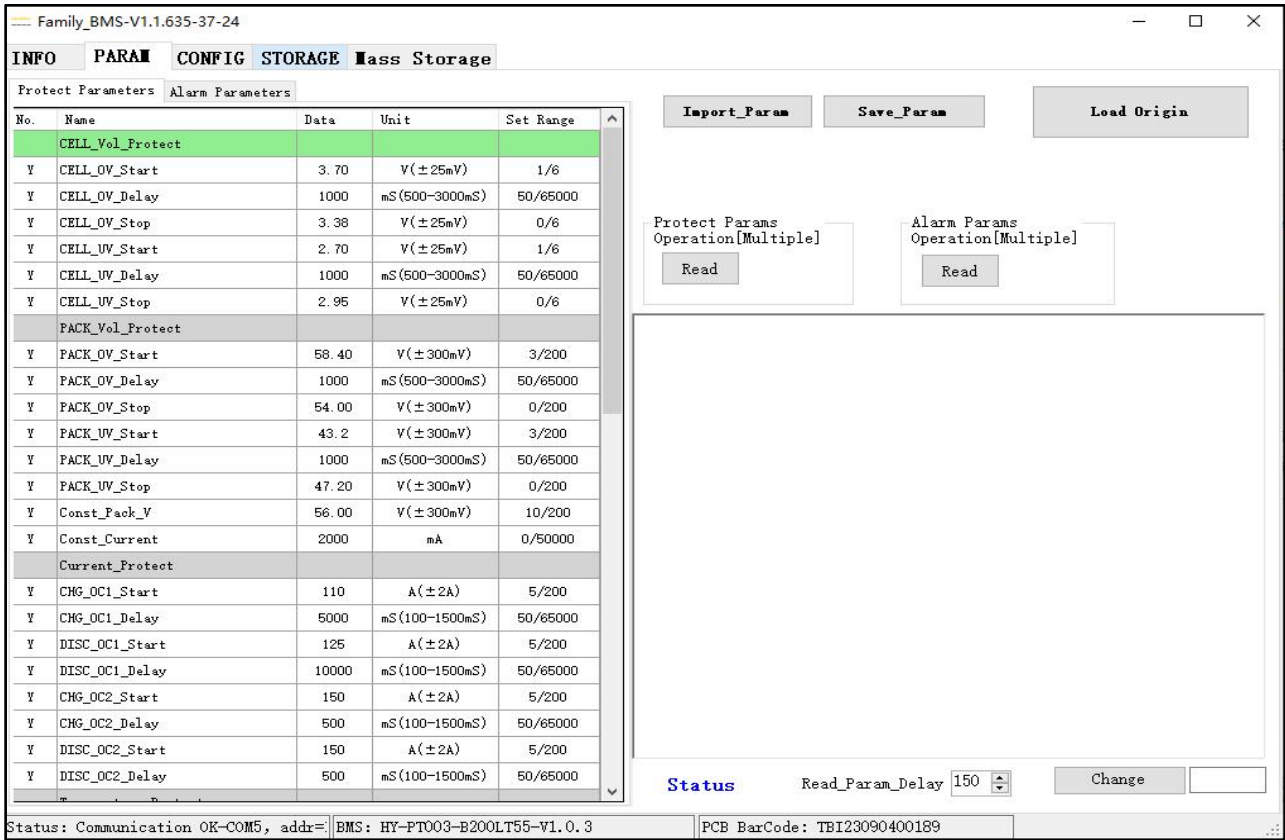
### 4.3.3 Multi-pack data monitoring

In the multi-pack data monitoring, the data of each battery pack can be compared and displayed. Click the "Multi Packs" interface under the "INFO" interface to view the multi-pack data. The specific operation is shown in the figure.



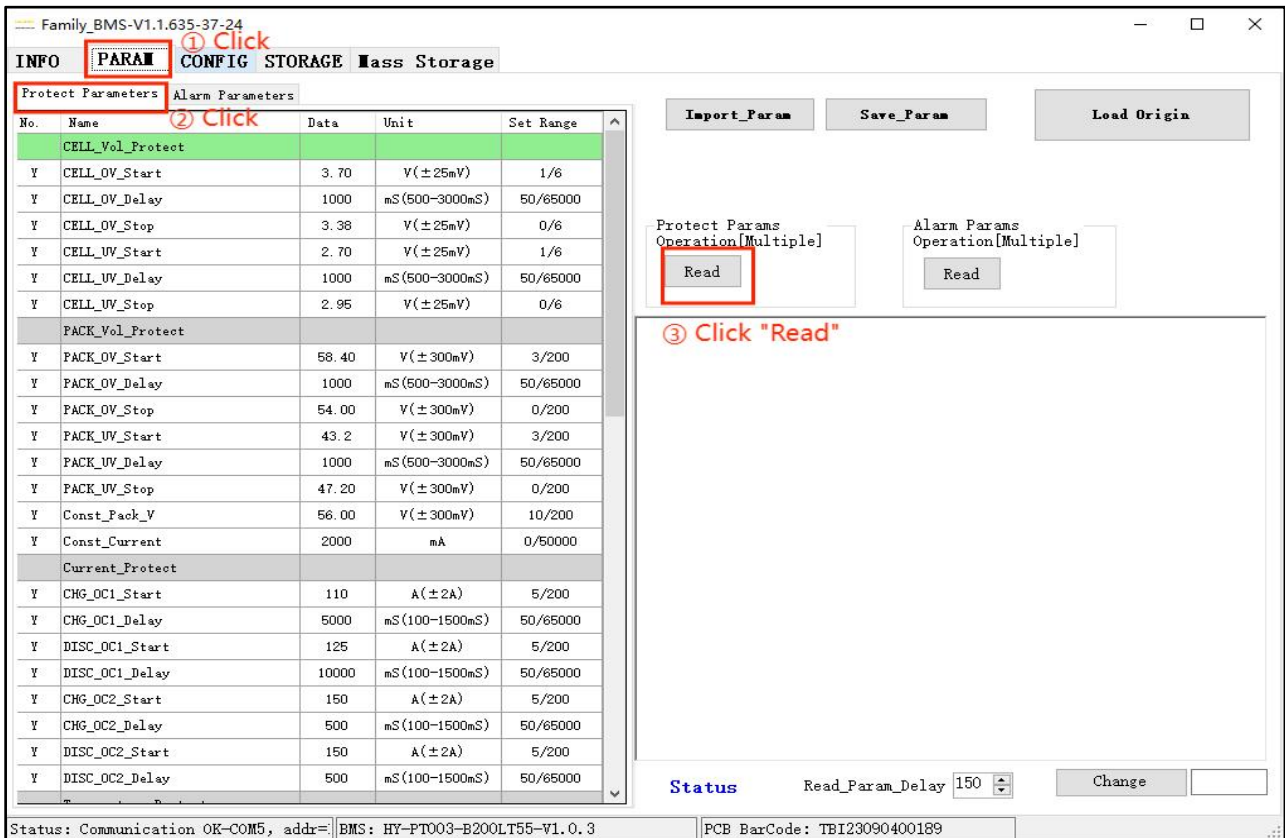
#### 4.4 PARAMETERS INTERFACE FUNCTION SETTINGS

This part includes the functions of reading basic parameter information, restoring default parameters, writing single parameters, writing all parameters, importing parameters and exporting parameters. The "Parameter" interface is shown in the figure below.

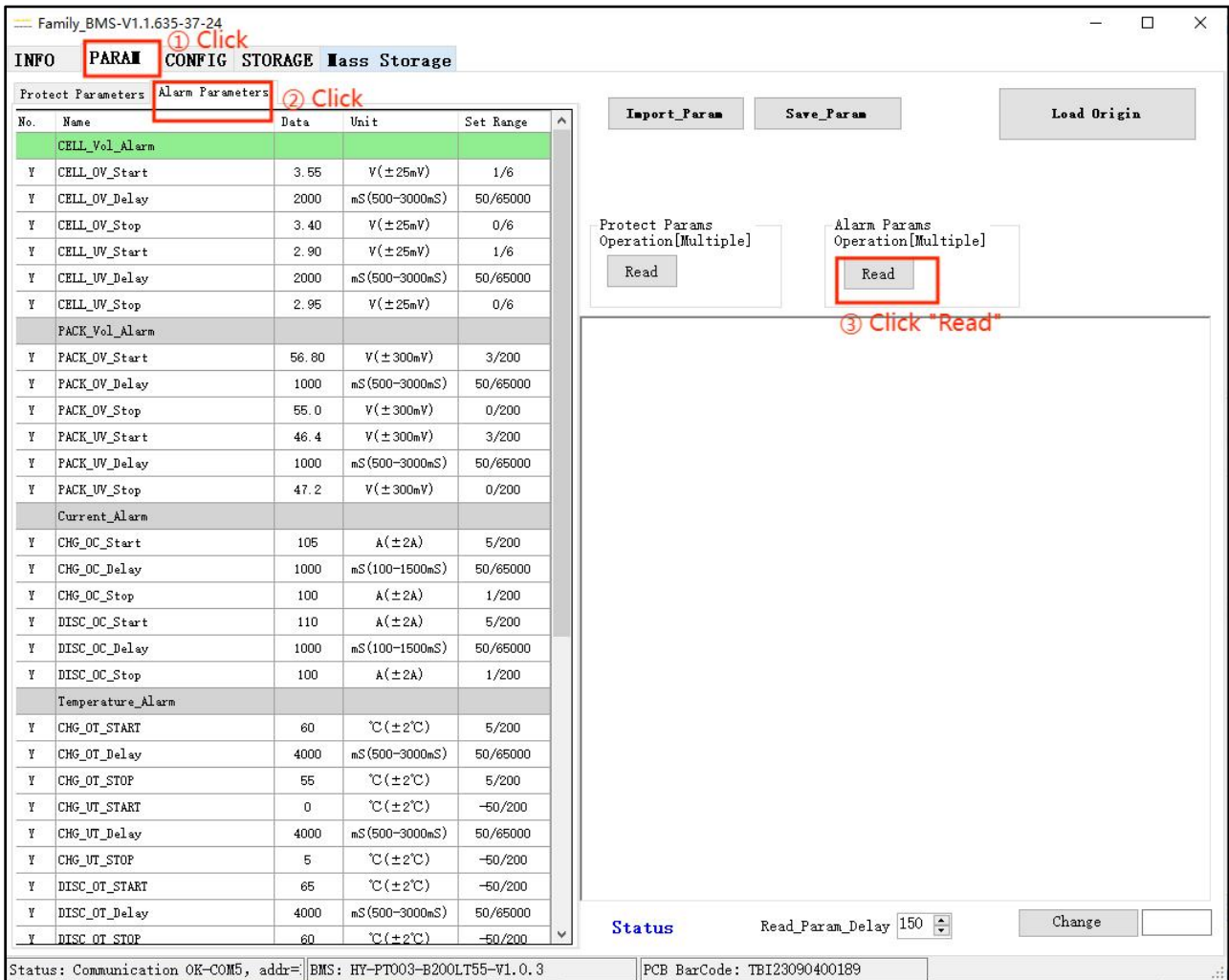


#### 4.4.1 Parameter reading

##### (1) Protection parameter reading



(2) Reading of the alarm parameters



4.4.2 Parameter modification (the range of the parameter should be indicated)

Take the modification of "CELL-OV-START" as an example, other parameters to modify the same operation. The specific operation is as shown in the figure:

(1) Modification of the protection parameters:

Family BMS-V1.1.635-37-24

INFO **PARAM** CONFIG STORAGE Mass Storage

Protect Parameters Alarm Parameters

No.	Name	Data	Unit	Set Range
	CELL_Vol_Protect			
Y	CELL_OV_Start	3.70	V(±25mV)	1/6
Y	CELL_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_OV_Stop	3.38	V(±25mV)	0/6
Y	CELL_UV_Start	2.70	V(±25mV)	1/6
Y	CELL_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_UV_Stop	2.95	V(±25mV)	0/6
PACK_Vol_Protect				
Y	PACK_OV_Start	58.40	V(±300mV)	3/200
Y	PACK_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_OV_Stop	54.00	V(±300mV)	0/200
Y	PACK_UV_Start	43.2	V(±300mV)	3/200
Y	PACK_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_UV_Stop	47.20	V(±300mV)	0/200
Y	Const_Pack_V	56.00	V(±300mV)	10/200
Y	Const_Current	2000	mA	0/50000
Current_Protect				
Y	CHG_OC1_Start	110	A(±2A)	5/200
Y	CHG_OC1_Delay	5000	mS(100-1500mS)	50/65000
Y	DISC_OC1_Start	125	A(±2A)	5/200
Y	DISC_OC1_Delay	10000	mS(100-1500mS)	50/65000
Y	CHG_OC2_Start	150	A(±2A)	5/200
Y	CHG_OC2_Delay	500	mS(100-1500mS)	50/65000
Y	DISC_OC2_Start	150	A(±2A)	5/200
Y	DISC_OC2_Delay	500	mS(100-1500mS)	50/65000

Import\_Param Save\_Param Load Origin

Param Operation[Simple]  
CELL\_OV\_Start 3.70 Write Read

Protect Params Operation[Multiple] Read Write

Alarm Params Operation[Multiple] Read Write

② Password: "666666" or "888888"

Status Read\_Param\_Delay 150 Change \*\*\*\*\*

Status: Communication OK-COM5, addr=BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TBI23090400189

(2) Modify the alarm parameters:

Family BMS-V1.1.635-37-24

INFO **PARAM** CONFIG STORAGE Mass Storage

Protect Parameters Alarm Parameters

No.	Name	Data	Unit	Set Range
	CELL_Vol_Protect			
Y	CELL_OV_Start	3.70	V(±25mV)	1/6
Y	CELL_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_OV_Stop	3.38	V(±25mV)	0/6
Y	CELL_UV_Start	2.70	V(±25mV)	1/6
Y	CELL_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_UV_Stop	2.95	V(±25mV)	0/6
PACK_Vol_Protect				
Y	PACK_OV_Start	58.40	V(±300mV)	3/200
Y	PACK_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_OV_Stop	54.00	V(±300mV)	0/200
Y	PACK_UV_Start	43.2	V(±300mV)	3/200
Y	PACK_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_UV_Stop	47.20	V(±300mV)	0/200
Y	Const_Pack_V	56.00	V(±300mV)	10/200
Y	Const_Current	2000	mA	0/50000
Current_Protect				
Y	CHG_OC1_Start	110	A(±2A)	5/200
Y	CHG_OC1_Delay	5000	mS(100-1500mS)	50/65000
Y	DISC_OC1_Start	125	A(±2A)	5/200
Y	DISC_OC1_Delay	10000	mS(100-1500mS)	50/65000
Y	CHG_OC2_Start	150	A(±2A)	5/200
Y	CHG_OC2_Delay	500	mS(100-1500mS)	50/65000
Y	DISC_OC2_Start	150	A(±2A)	5/200
Y	DISC_OC2_Delay	500	mS(100-1500mS)	50/65000

Import\_Param Save\_Param Load Origin

Param Operation[Simple]  
CELL\_OV\_Start 3.70 Write Read

Protect Params Operation[Multiple] Read Write

Alarm Params Operation[Multiple] Read Write

② Password: "666666" or "888888"

Status Read\_Param\_Delay 150 Change \*\*\*\*\*

Status: Communication OK-COM5, addr=BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TBI23090400189

### 4.4.3 Parameter export

**① Click "PARAM"**

**③ Click "Save Param"**

**② Click "Read" to get Protect params and Alarm params.**

No.	Name	Data	Unit	Set Range
<b>CELL_Vol_Protect</b>				
Y	CELL_OV_Start	3.70	V(±25mV)	1/6
Y	CELL_OV_Delay	1000	ms(500~3000ms)	50/85000
Y	CELL_OV_Stop	3.38	V(±25mV)	0/6
Y	CELL_UV_Start	2.70	V(±25mV)	1/6
Y	CELL_UV_Delay	1000	ms(500~3000ms)	50/85000
Y	CELL_UV_Stop	2.95	V(±25mV)	0/6
<b>PACK_Vol_Protect</b>				
Y	PACK_OV_Start	58.40	V(±300mV)	3/200
Y	PACK_OV_Delay	1000	ms(500~3000ms)	50/85000
Y	PACK_OV_Stop	54.00	V(±300mV)	0/200
Y	PACK_UV_Start	43.2	V(±300mV)	3/200
Y	PACK_UV_Delay	1000	ms(500~3000ms)	50/85000
Y	PACK_UV_Stop	47.20	V(±300mV)	0/200
Y	Const_Pack_V	56.00	V(±300mV)	10/200
Y	Const_Current	2000	mA	0/50000
<b>Current_Protect</b>				
Y	CHG_OC1_Start	110	A(±2A)	5/200
Y	CHG_OC1_Delay	5000	ms(100~1500ms)	50/85000
Y	DISC_OC1_Start	125	A(±2A)	5/200
Y	DISC_OC1_Delay	10000	ms(100~1500ms)	50/85000
Y	CHG_OC2_Start	150	A(±2A)	5/200
Y	CHG_OC2_Delay	500	ms(100~1500ms)	50/85000
Y	DISC_OC2_Start	150	A(±2A)	5/200
Y	DISC_OC2_Delay	500	ms(100~1500ms)	50/85000
<b>Temperature_Protect</b>				
Y	CHG_OT_START	65	°C(±2°C)	5/200
Y	CHG_OT_Delay	4000	ms(500~3000ms)	50/85000
Y	CHG_OT_STOP	55	°C(±2°C)	5/200
Y	DISC_OT_START	70	°C(±2°C)	5/200
Y	DISC_OT_Delay	4000	ms(500~3000ms)	50/85000
Y	DISC_OT_STOP	60	°C(±2°C)	5/200
Y	CHG_UT_START	-5	°C(±2°C)	-50/200

Status: Communication OK-COM5, addr=|BMS: HY-PT003-B200LT55-V1.0.3 | PCB BarCode: TBI23090400189

Save this Doc.

文件名称: protect\_alarm\_20240506183843  
保存类型: 数据文件(\*.xml)

保存(S) 取消



### 4.4.4 Parameter import

Family\_BMS-V1.1.635-37-24

Click " import param"

Protect Parameters Alarm Parameters

No.	Name	Data	Unit	Set Range
Y	CELL_Vol_Protect			
Y	CELL_OV_Start	3.70	V(±25mV)	1/6
Y	CELL_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_OV_Stop	3.38	V(±25mV)	0/6
Y	CELL_UV_Start	2.70	V(±25mV)	1/6
Y	CELL_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	CELL_UV_Stop	2.95	V(±25mV)	0/6
PACK_Vol_Protect				
Y	PACK_OV_Start	58.40	V(±300mV)	3/200
Y	PACK_OV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_OV_Stop	54.00	V(±300mV)	0/200
Y	PACK_UV_Start	43.2	V(±300mV)	3/200
Y	PACK_UV_Delay	1000	mS(500-3000mS)	50/65000
Y	PACK_UV_Stop	47.20	V(±300mV)	0/200
Y	Const_Pack_V	58.00	V(±300mV)	10/200
Y	Const_Current	2000	mA	0/50000
Current_Protect				
Y	CHG_OCI_Start	110	A(±2A)	5/200
Y	CHG_OCI_Delay	5000	mS(100-1500mS)	50/65000
Y	DISC_OCI_Start	125	A(±2A)	5/200
Y	DISC_OCI_Delay	10000	mS(100-1500mS)	50/65000
Y	CHG_OC2_Start	150	A(±2A)	5/200
Y	CHG_OC2_Delay	500	mS(100-1500mS)	50/65000
Y	DISC_OC2_Start	150	A(±2A)	5/200
Y	DISC_OC2_Delay	500	mS(100-1500mS)	50/65000
Temperature_Protect				
Y	CHG_OT_START	65	°C(±2°C)	5/200
Y	CHG_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	CHG_OT_STOP	55	°C(±2°C)	5/200
Y	DISC_OT_START	70	°C(±2°C)	5/200
Y	DISC_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	DISC_OT_STOP	60	°C(±2°C)	5/200
Y	CHG_UT_START	-5	°C(±2°C)	-50/200

Import\_Param Save\_Param Load Origin

Protect Params Operation [Multiple] Read

Alarm Params Operation [Multiple] Read

Status Read\_Param\_Delay 150 Change

Status: Communication OK-COM5, addr= BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TBI23090400189

protect\_alarm\_20240506183843

① Choose the doc. you saved just now.

Remark: The doc. must be exported by the same version of the upper computer, otherwise garbled characters will be generated.

② Click "open"

Form file(\*.xml) 打开(O) 取消

### 4.4.5 Configure the default parameters of the upper monitor system

Note: After the protection parameters and alarm parameters are read, the parameters of the upper monitor system appear red color. The reason for this phenomenon is that the parameter version of the upper monitor system and the BMS are not consistent, which does not affect the normal use, and the operation is not recommended. If the operation of "cancel the mark red" is required, please contact the Basengreen customer service.

### 4.4.6 Current-limiting mode

Note: 0,3,4,5,10, five modes, other numbers are meaningless.

Each of the five current limiting modes are as follows:

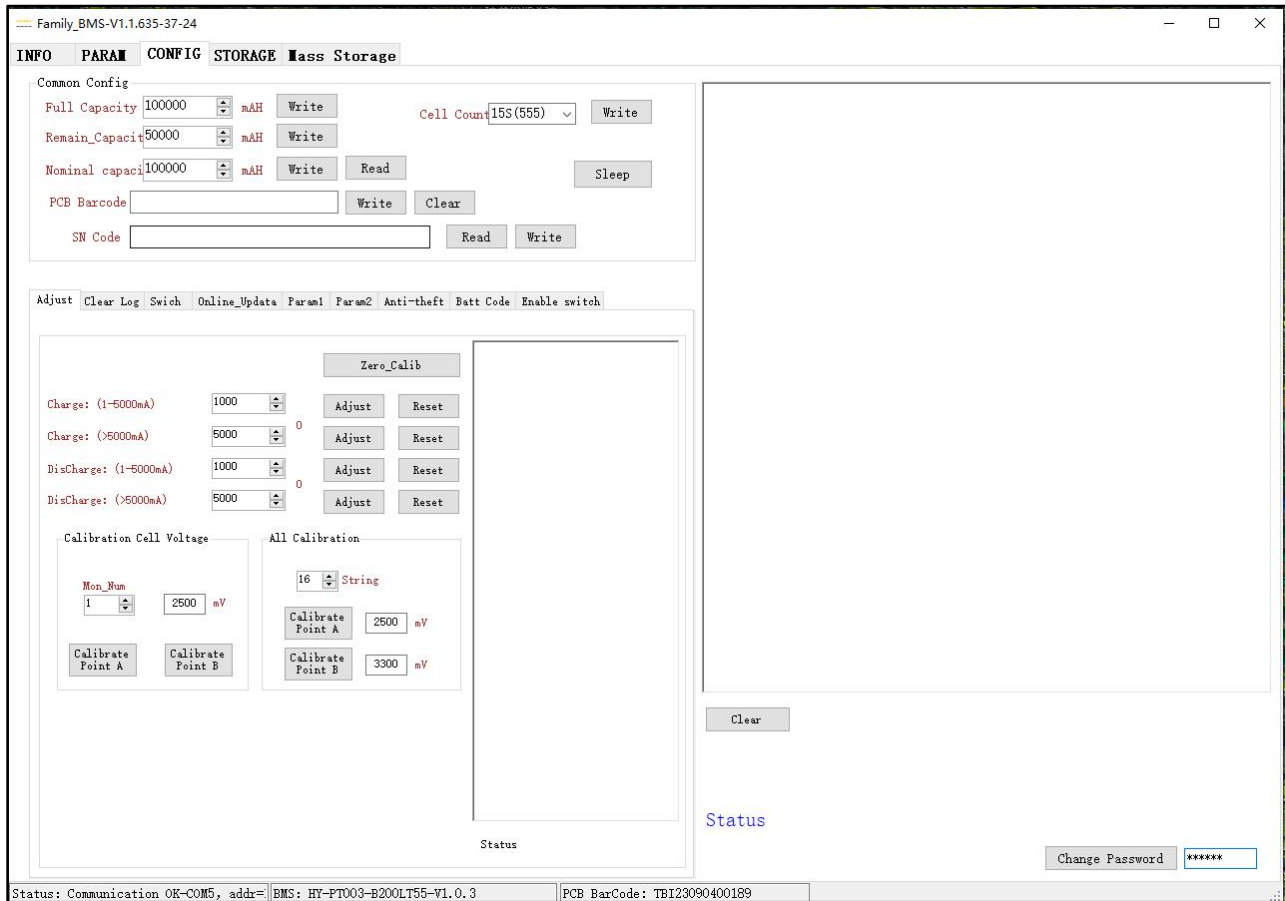
- 0: unlimited flow mode;
- 3: Half of the lower flow value of the passive flow limiting mode;
- 4: Passive flow-limiting mode;
- 5: Half of the lower flow value of the active current limiting mode;
- 10: Active current limiting mode.

The screenshot shows the 'PARAM' configuration window in the BMS software. The 'LC\_Style' parameter is highlighted in green in the table and set to '4' in the configuration panel. The 'Write' button is also highlighted. A red arrow points to the '4' with the text 'different number represents different models'. The password field is highlighted with the text 'password: "666666" or "888888"'. The status bar at the bottom shows 'Status: Communication OK-COM5, addr=: BMS: HY-PT003-B200LT55-V1.0.3'.

No.	Name	Data	Unit	Set Range
Y	CHG_OT_START	65	°C(±2°C)	5/200
Y	CHG_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	CHG_OT_STOP	55	°C(±2°C)	5/200
Y	DISC_OT_START	70	°C(±2°C)	5/200
Y	DISC_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	DISC_OT_STOP	60	°C(±2°C)	5/200
Y	CHG_UT_START	-5	°C(±2°C)	-50/200
Y	CHG_UT_Delay	4000	mS(500-3000mS)	50/65000
Y	CHG_UT_STOP	0	°C(±2°C)	-50/200
Y	DISC_UT_START	-20	°C(±2°C)	-50/200
Y	DISC_UT_Delay	4000	mS(500-3000mS)	50/65000
Y	DISC_UT_STOP	-15	°C(±2°C)	-50/200
Y	MDS_OT_START	110	°C(±2°C)	-50/200
Y	MDS_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	MDS_OT_STOP	85	°C(±2°C)	-50/200
Y	ENV_OT_START	70	°C(±2°C)	-50/200
Y	ENV_OT_Delay	4000	mS(500-3000mS)	50/65000
Y	ENV_OT_STOP	65	°C(±2°C)	-50/200
Y	ENV_UT_START	-25	°C(±2°C)	-50/200
Y	ENV_UT_Delay	4000	mS(500-3000mS)	50/65000
Y	ENV_UT_STOP	-20	°C(±2°C)	-50/200
OTHERS				
Y	Balance_Start_Vol	3.45	V(±25mV)	1/6
Y	Balance_Start_Diff	30	mV(±25mV)	5/2000
Y	Shorts_Delay	300	uS	50/65000
Y	Standby_Time	7200	Min	0/7200
Y	Sleep_Time	60	Min	0/65535
Y	UV_OFF_Time	28800	Sec	0/65535
Y	LC_Style	4	N	0/10
Y	Sleep_Cell_Volt	3.15	V	0/10
Y	Set_Full_charge_capacity	100	Ah	0/65535
Y	Set_Remaining_capacity	60	Ah	0/65535

## 4.5 "CONFIGURATION" INTERFACE FUNCTION SETTING

The functions of this part include system parameters read / write, reading BMS information, reading / setting switch status, data calibration and other functions.

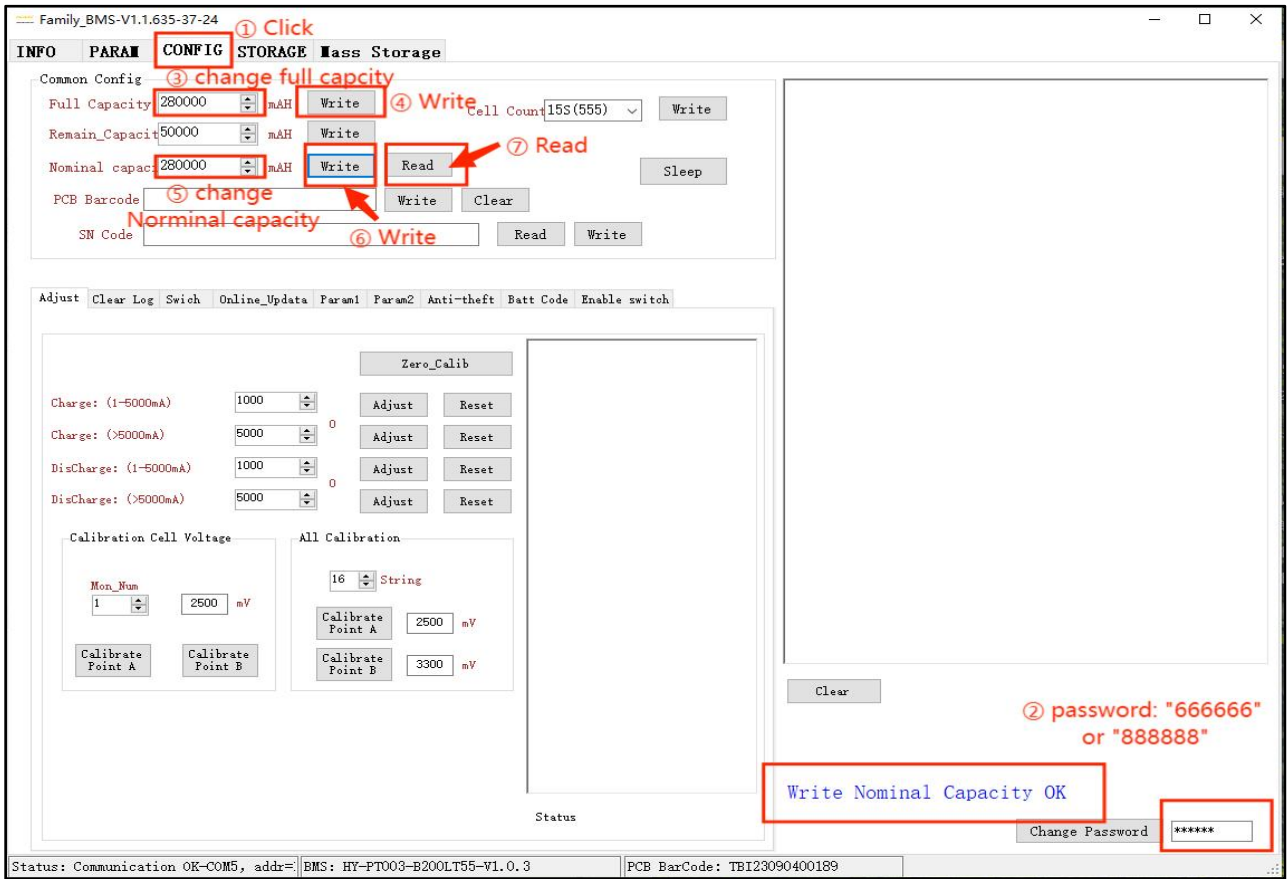


### 4.5.1 Modification of the battery capacity

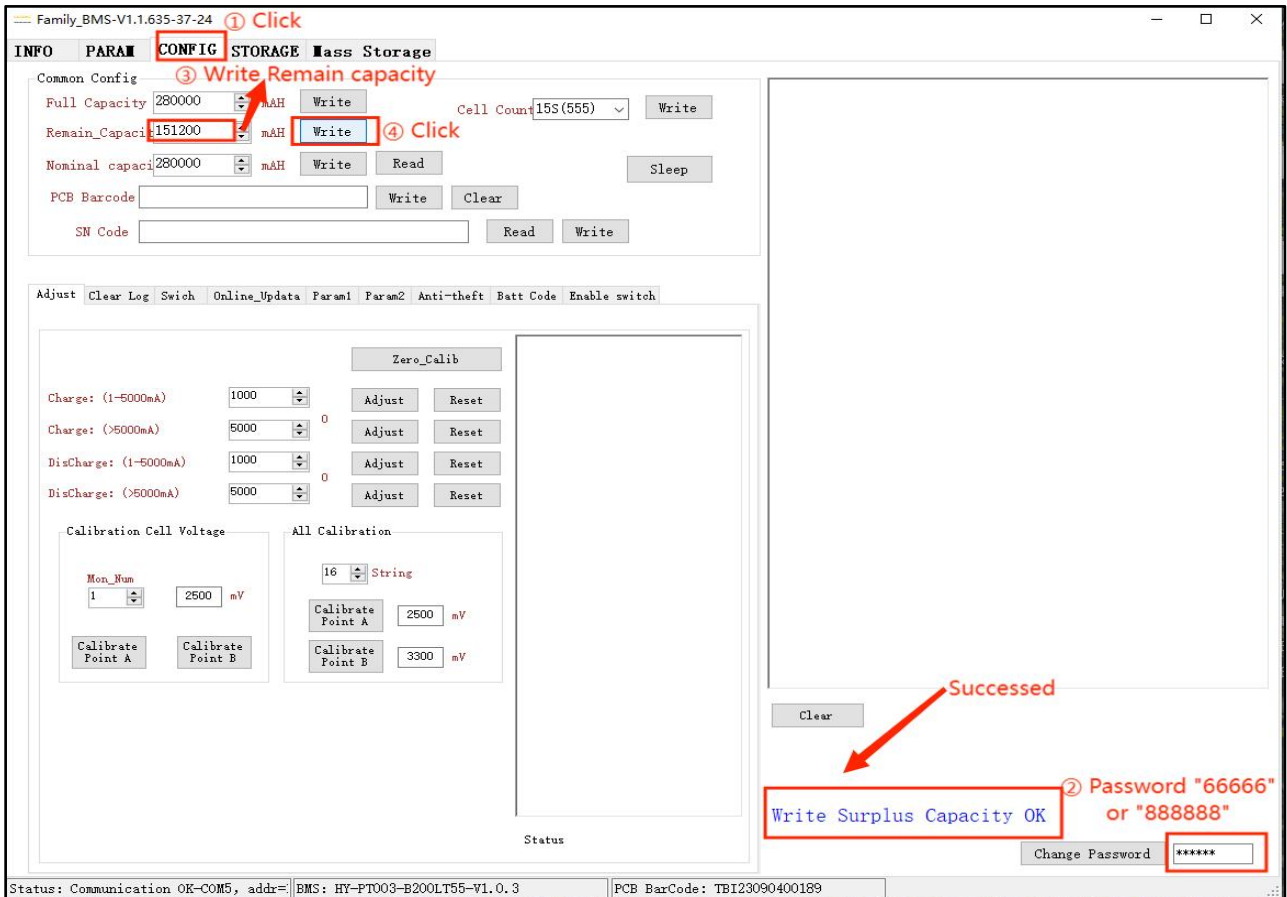
Note: "Nominal capacity" represents the rated capacity, and "Full capacity" represents the actual full charge capacity

#### (1) Full capacity modification

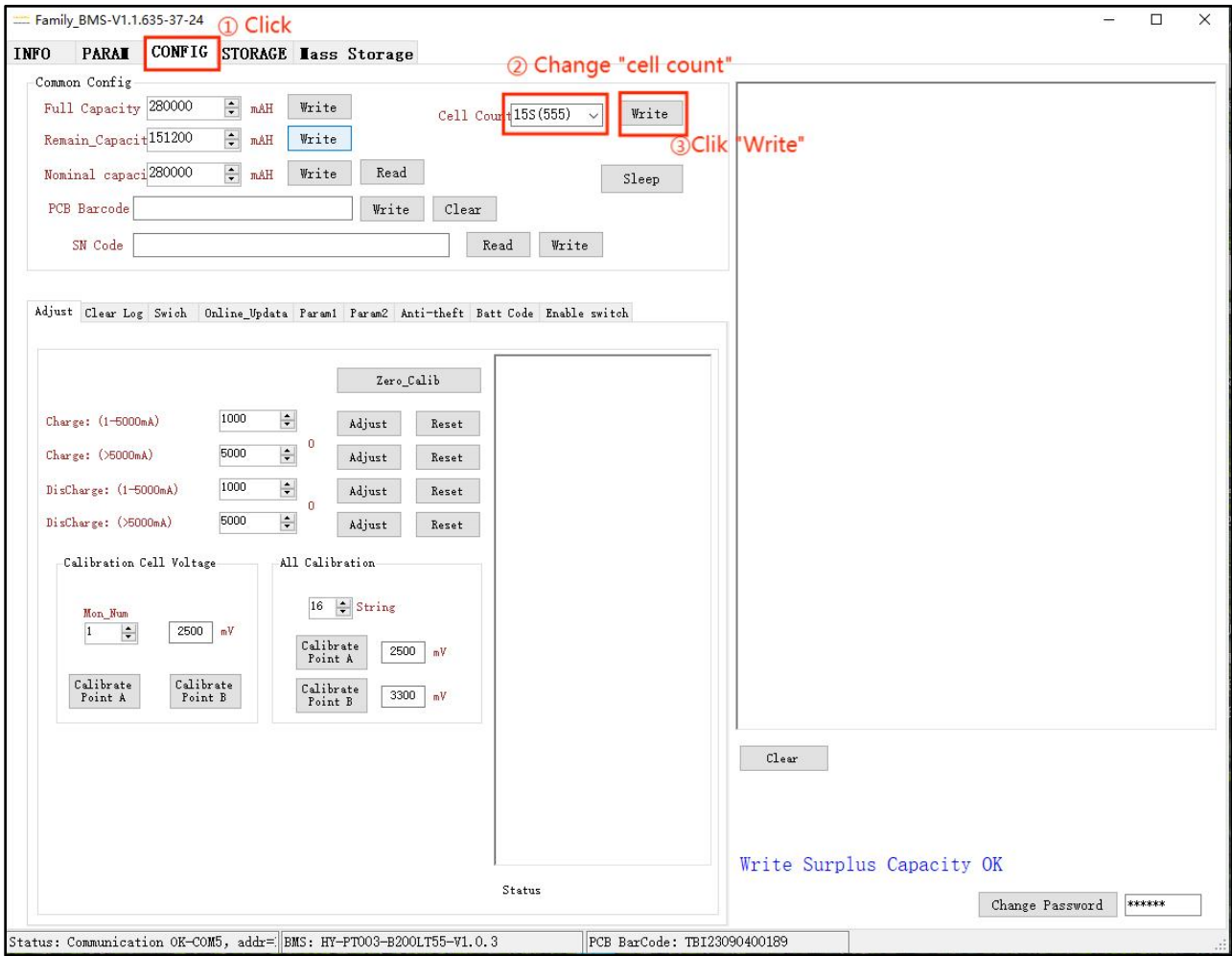
If the actual capacity of the battery is quite different from the default battery capacity of the factory, the "Nominal capacity" should be modified at the same time, when the "Full capacity" is modified. For example, if the factory battery capacity is set to be 100 AH, but the actual battery capacity is 200 AH, then when the "Full capacity" is modified to 200 AH, the "Nominal capacity" also needs to be changed to 200 AH.



(2) Change the remaining capacity

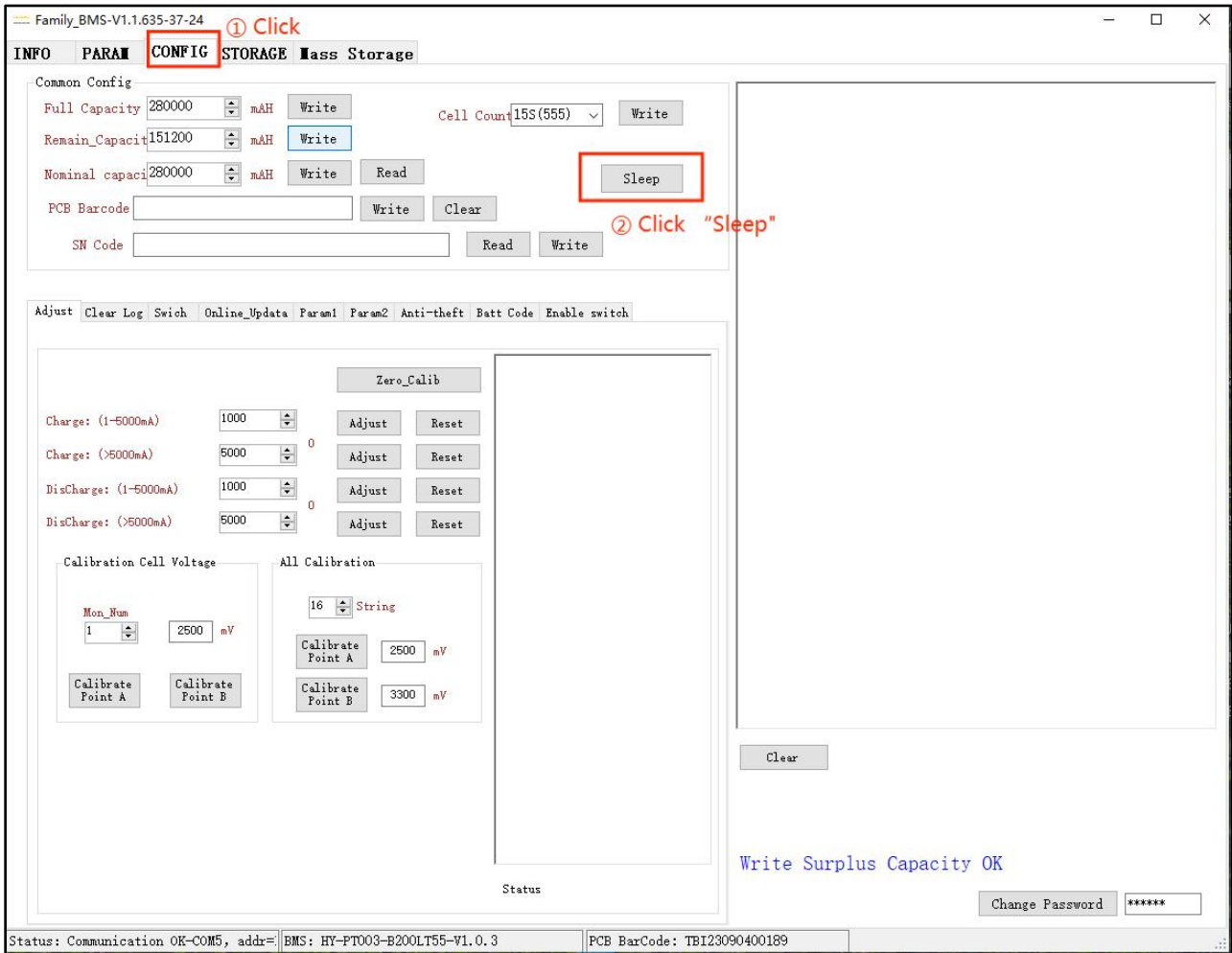


### 4.5.2 Modification of battery strings



Note: After the modification, the data related to the total voltage should also be modified. The wiring shall be adjusted according to different versions. Operation is not recommended. Please confirm with the Basengreen.

### 4.5.3 Forced dormancy function of upper monitor system



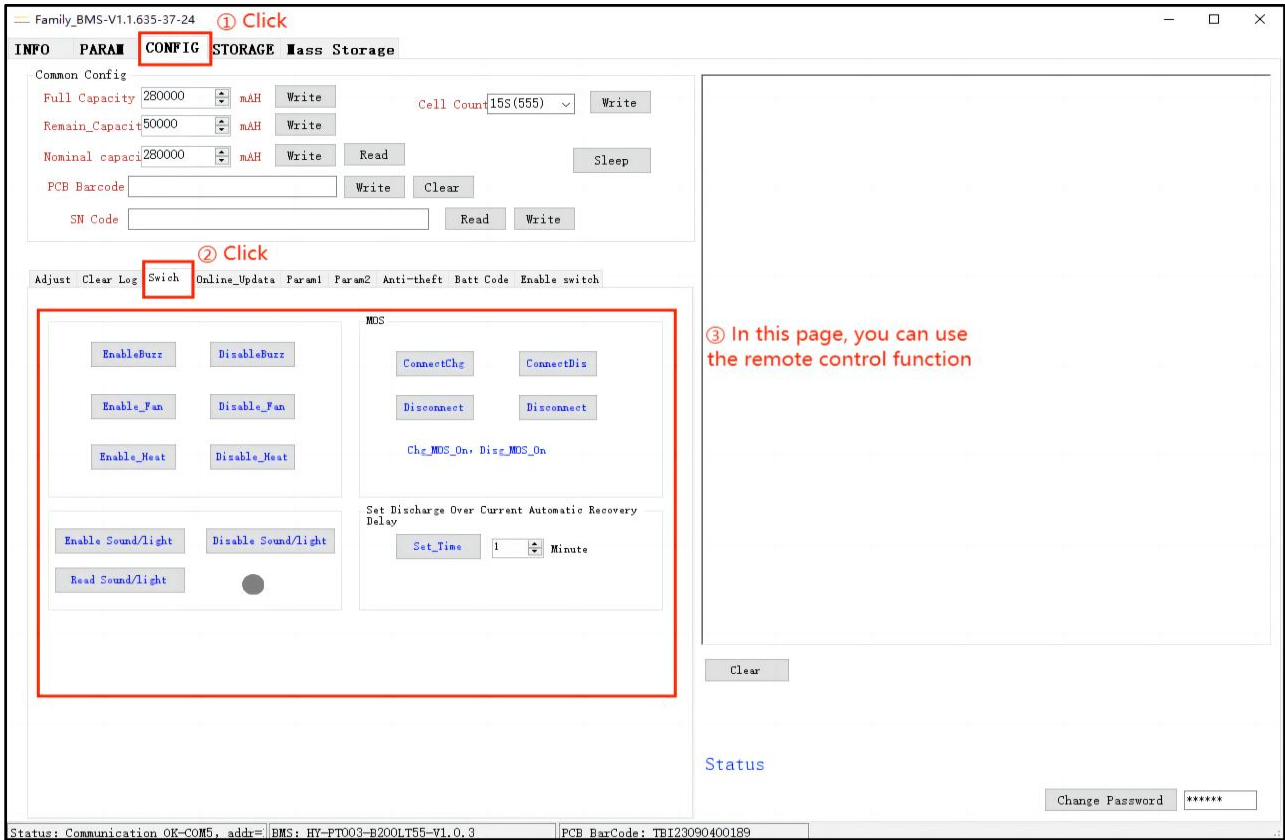
Note: 1. It is impossible to force the battery pack to sleep while charging.

2. If you need to wake up after forced dormancy, there are two operation modes, one is to press the reset (RTS) button on the battery pack, and the other is to charge the BMS.

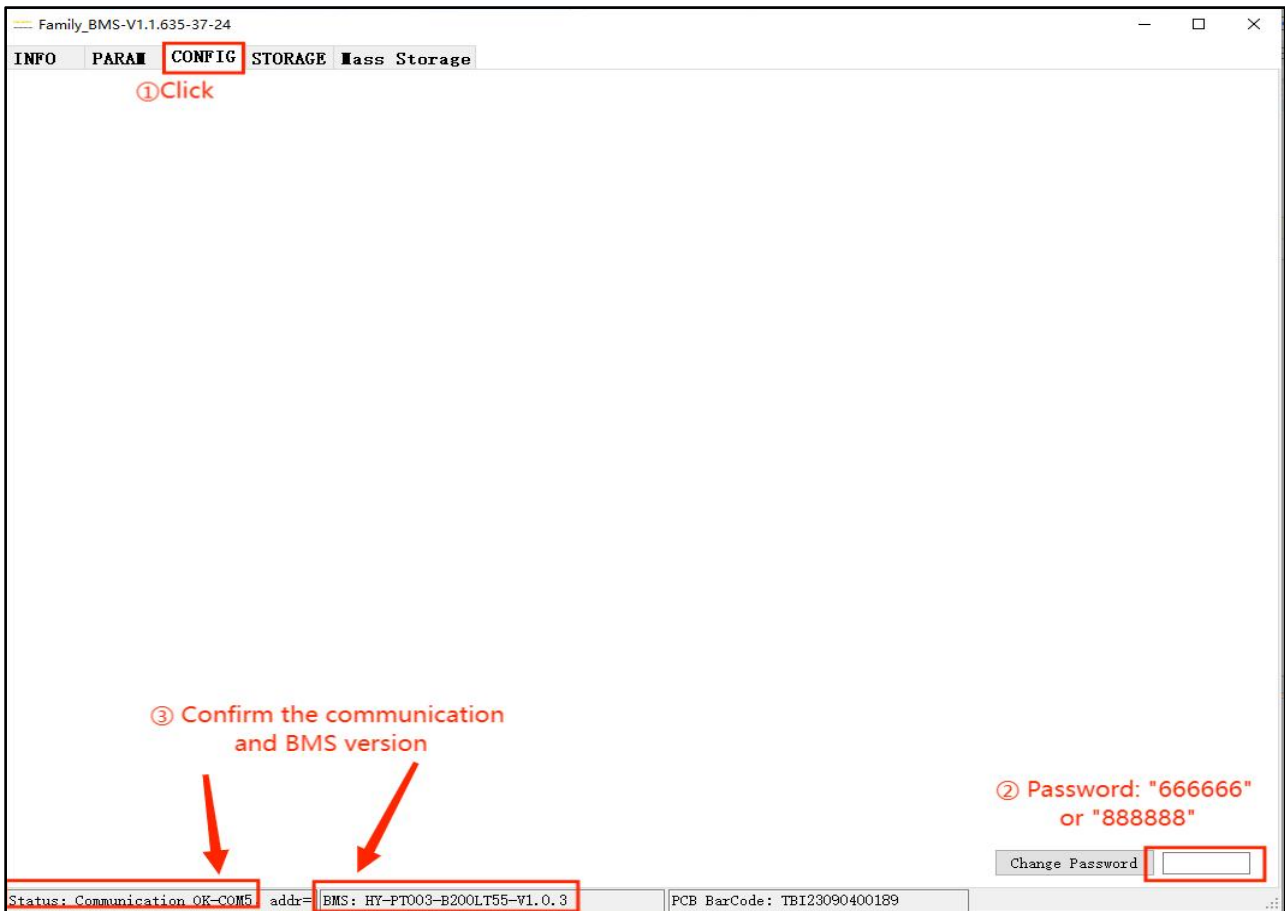
#### 4.5.4 Function "Remote control"

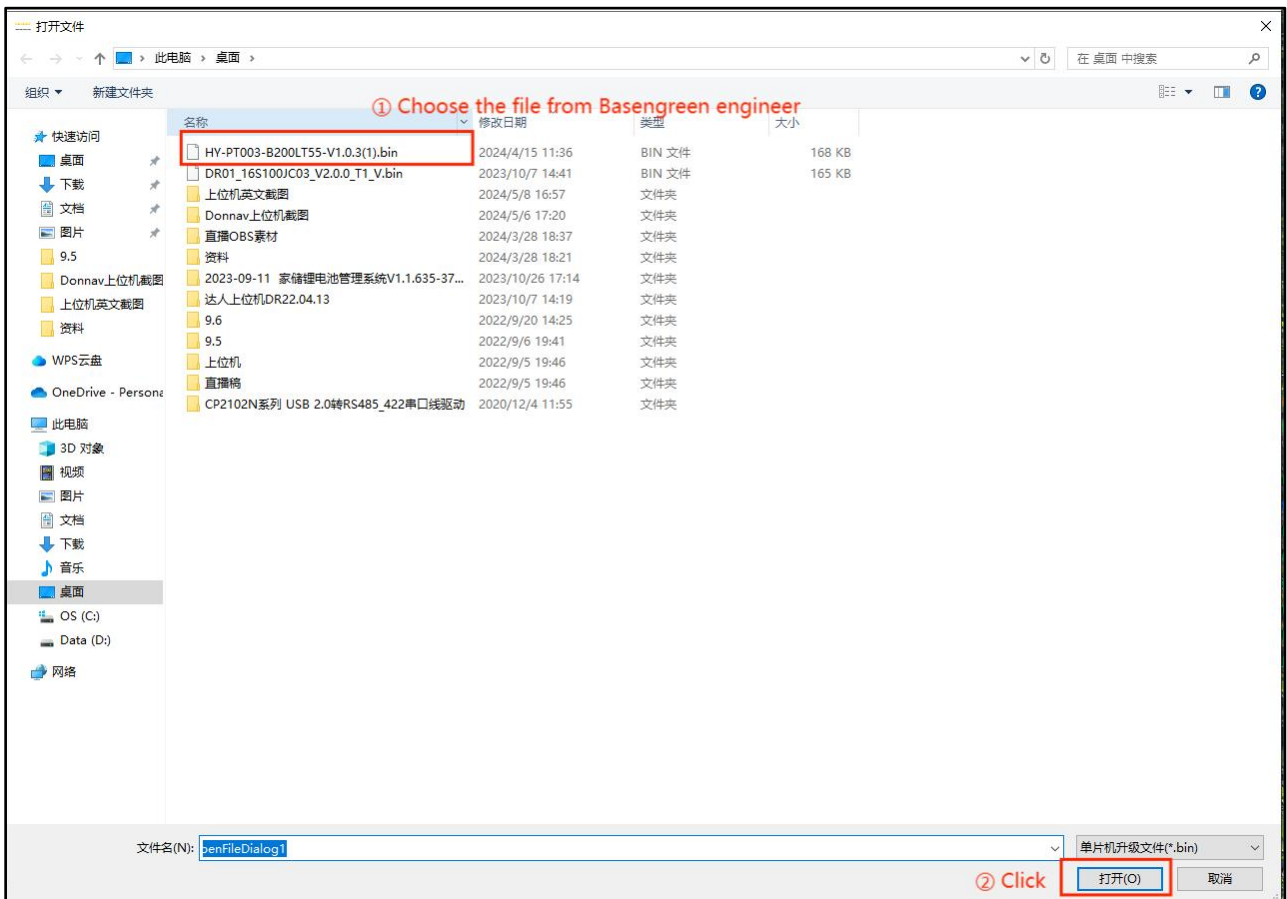
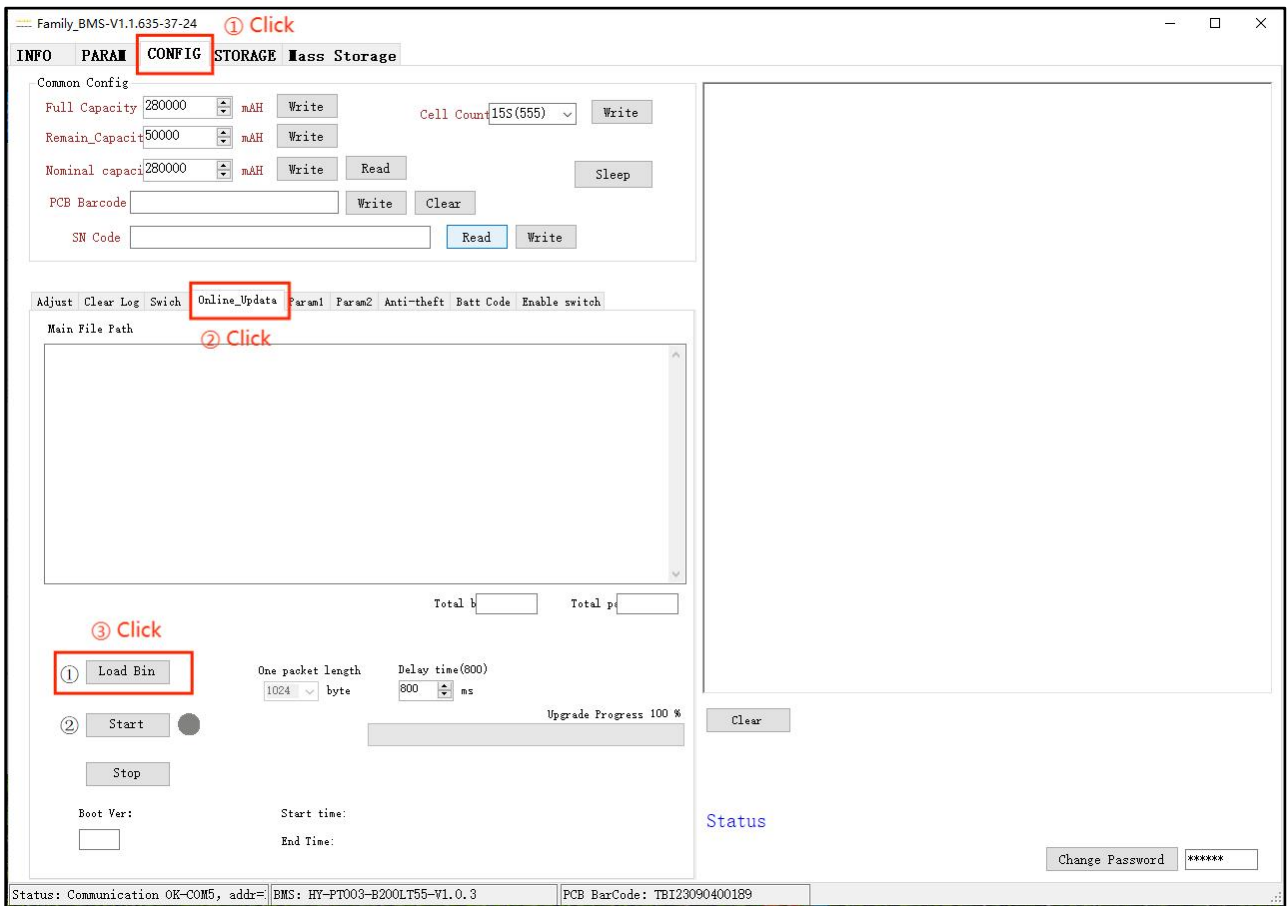
Note: 1. Whether the ordinary remote control function can be used depends on whether the hardware supports this function, and whether the hardware is configured, please refer to the specification.

2. This interface is usually recommended only for testing. If required, please confirm with the Basengreen.

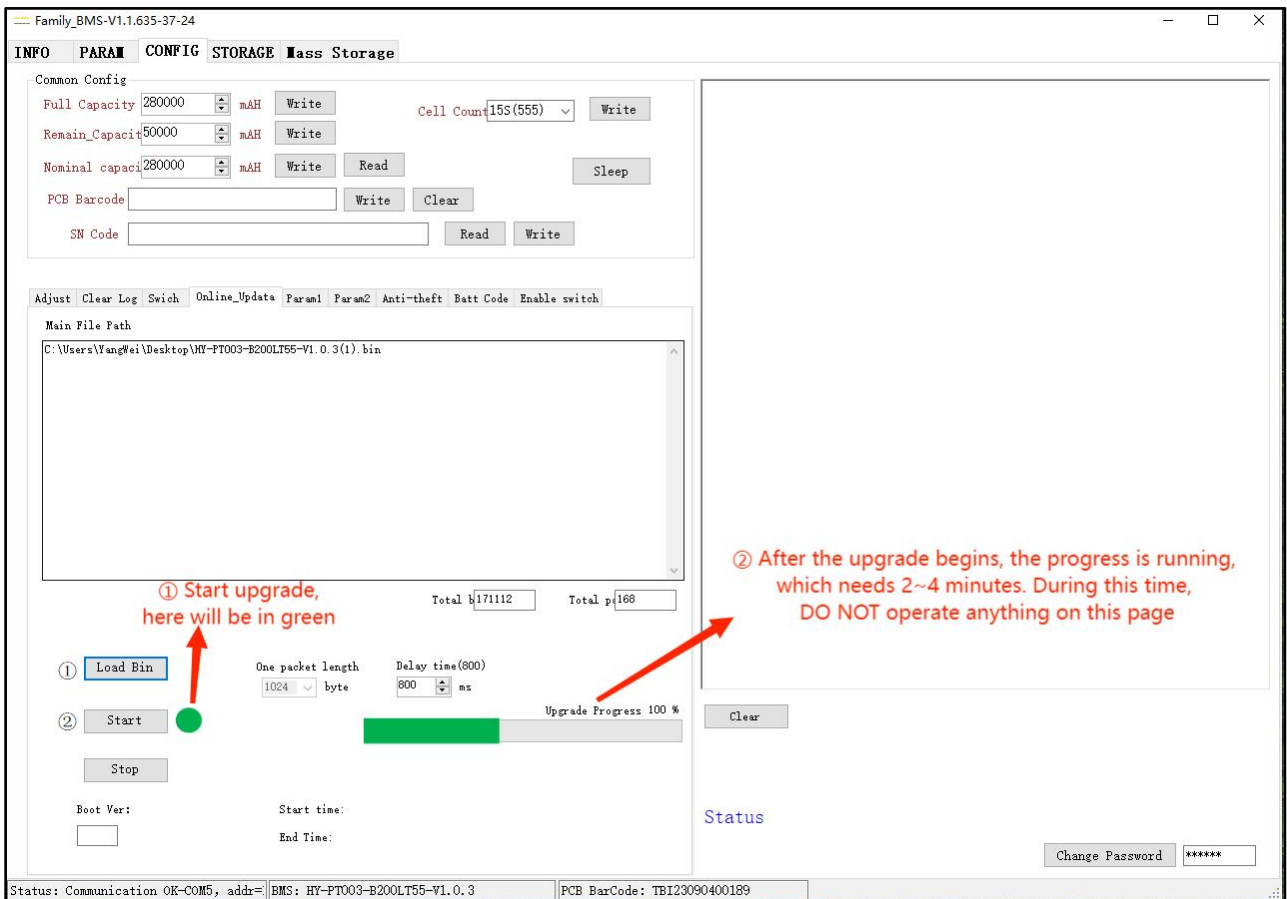
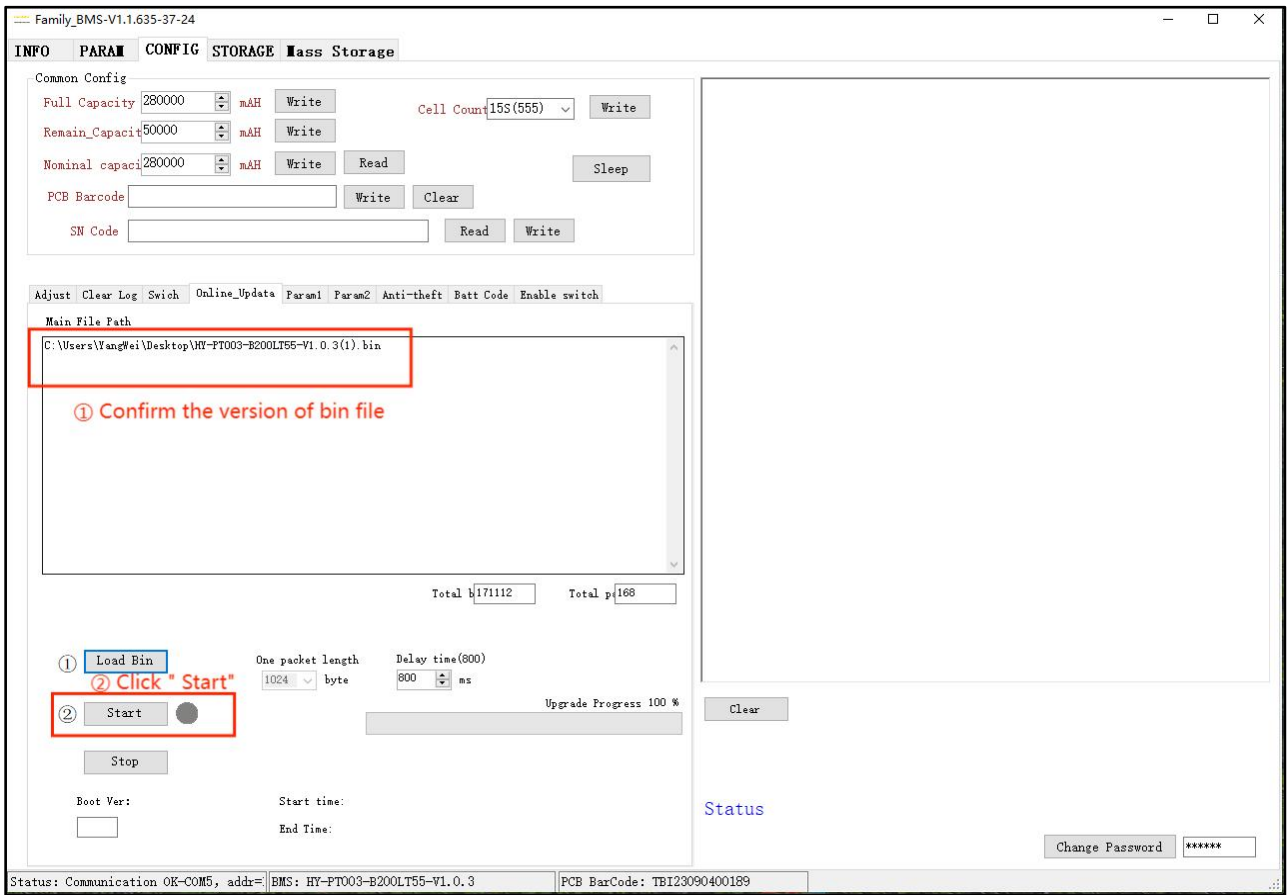


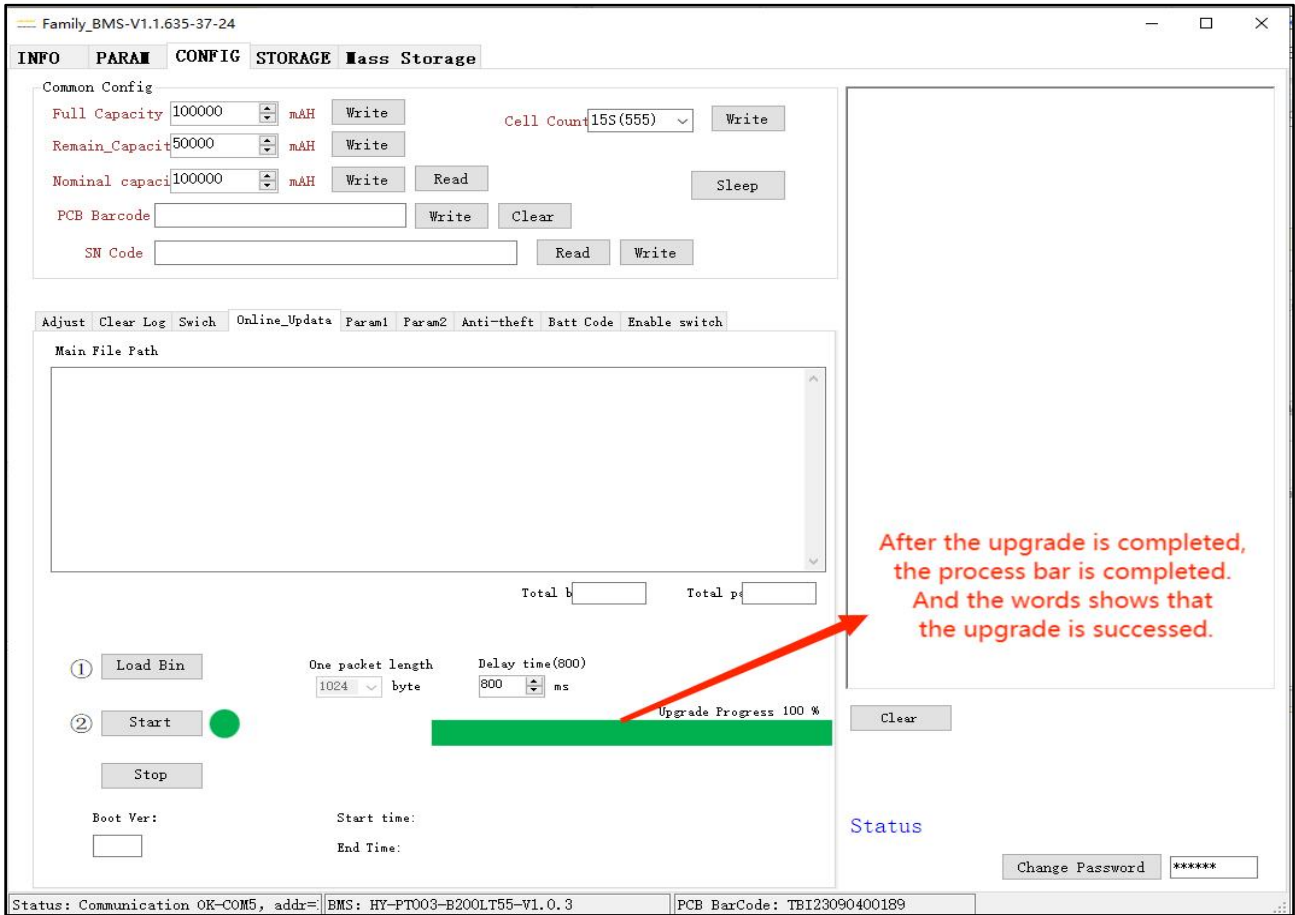
### 4.5.5 Software upgrade



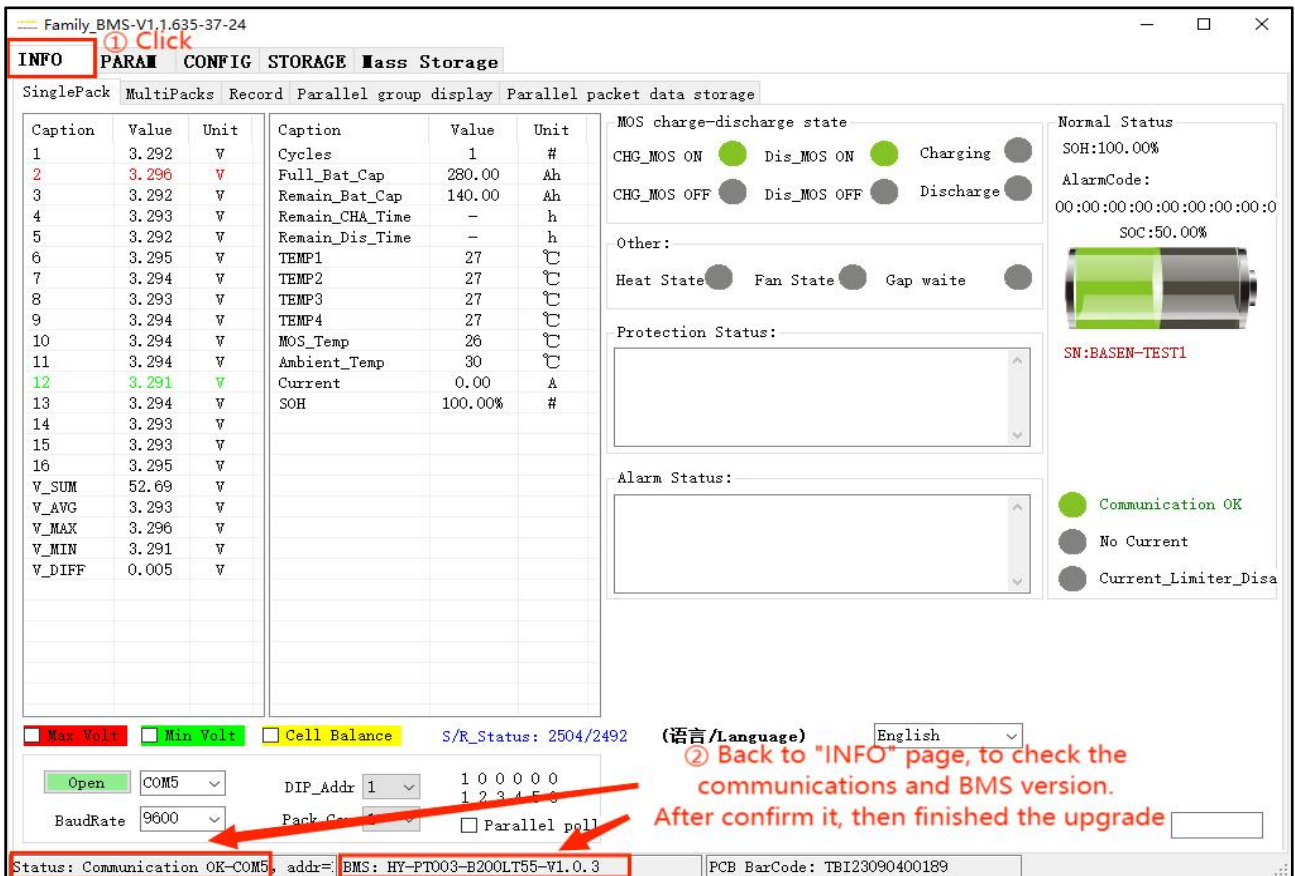








After the upgrade is completed, the process bar is completed. And the words shows that the upgrade is succeeded.



② Back to "INFO" page, to check the communications and BMS version. After confirm it, then finished the upgrade

Upgrade Notes:

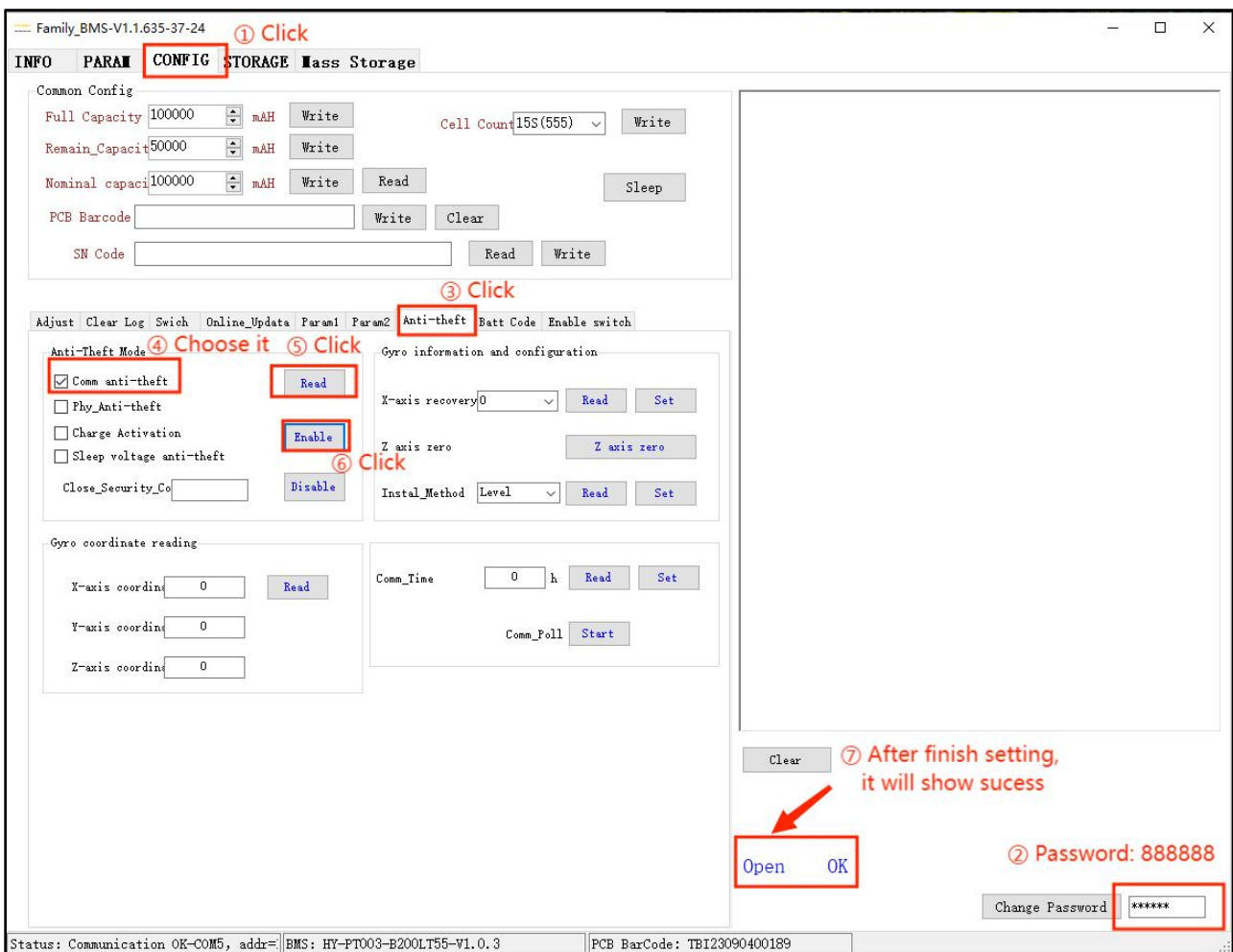
- (1) During the upgrade process, do not power off or switch to other operation interface. If there is half of the power off upgrade, refer to article 3 below to repair;
- (2) If the corresponding bin file is selected, the program provided by the BMS manufacturer must be used;
- (3) If the upgrade fails and re-operation is suggested. If the communication remains unchanged, the point will start upgrading. Press the board reset (RTS) button to be about 10S, which can connect the board to restart and upgrade again.

4.5.6 Anti-theft Settings

(1) Communication and anti-theft prevention

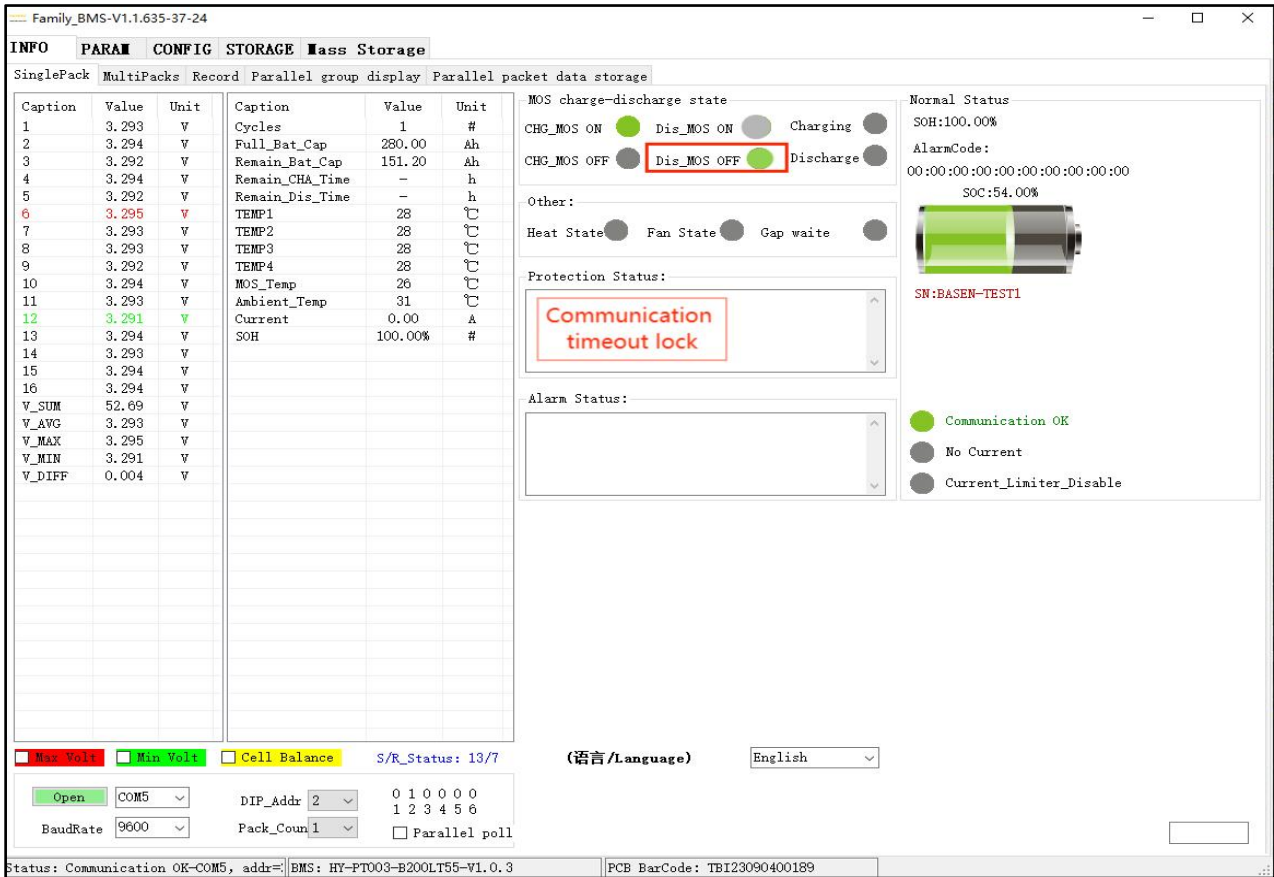
① Communication anti-theft function setting

After the communication anti-theft function is set successfully up, when the communication is interrupted for more than 48 hours, the battery is locked and the discharge MOS is turned off.



② Communication anti-theft function is triggered

After the communication anti-theft function is enabled, when the communication is interrupted for more than 48 hours, the communication anti-theft is triggered, turn off and discharge the MOS, and report the "communication timeout locked", which can be viewed in the monitoring interface.



### ③ Communication anti-theft function to unlock

Family\_BMS-V1.1.635-37-24

**① Click**

INFO PARAM **CONFIG** STORAGE Mass Storage

Common Config

Full Capacity 100000 mAH Write Cell Count 15S(555) Write

Remain\_Capacit 50000 mAH Write

Nominal capaci 100000 mAH Write Read Sleep

PCB Barcode Write Clear

SN Code Read Write

**③ Click**

Adjust Clear Log Switch Online\_Update Param1 Param2 **Anti-theft** Batt Code Enable switch

Anti-Theft Mode

Comm anti-theft Read

Phy\_Anti-theft

Charge Activation Enable

Sleep voltage anti-theft

Close\_Security\_Co \*\*\*\*\* **Disable**

**④ Password: 654321** **⑤ Click "Disable"**

Gyro information and configuration

X-axis recovery 0 Read Set

Z axis zero Z axis zero

Instal\_Method Level Read Set

Gyro coordinate reading

X-axis coordin 0 Read

Y-axis coordin 0

Z-axis coordin 0

Comm\_Time 0 h Read Set

Comm\_Poll Start

**⑥ it will show success as below**

Clear

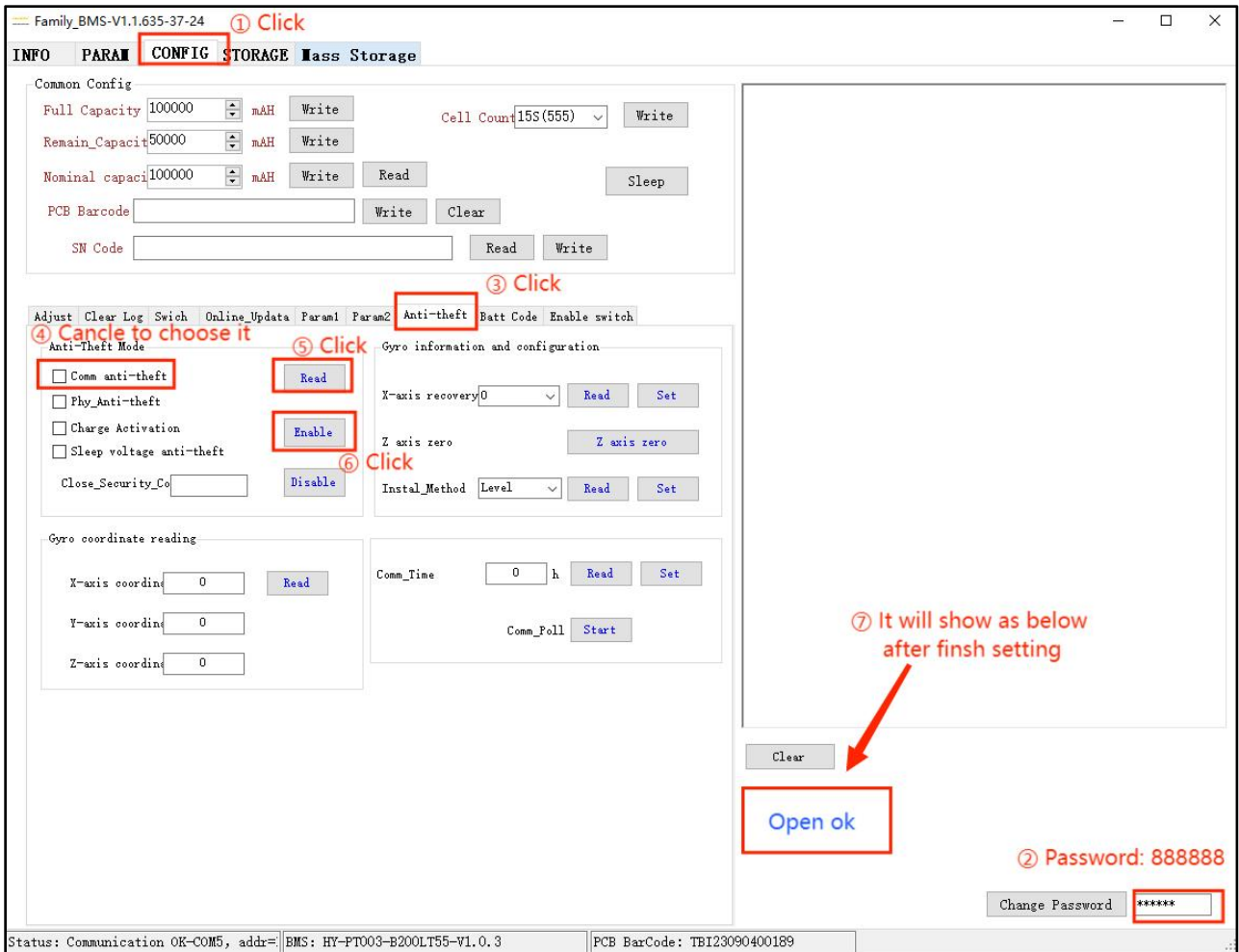
**Unlock ok**

**② Password: 888888**

Change Password \*\*\*\*\*

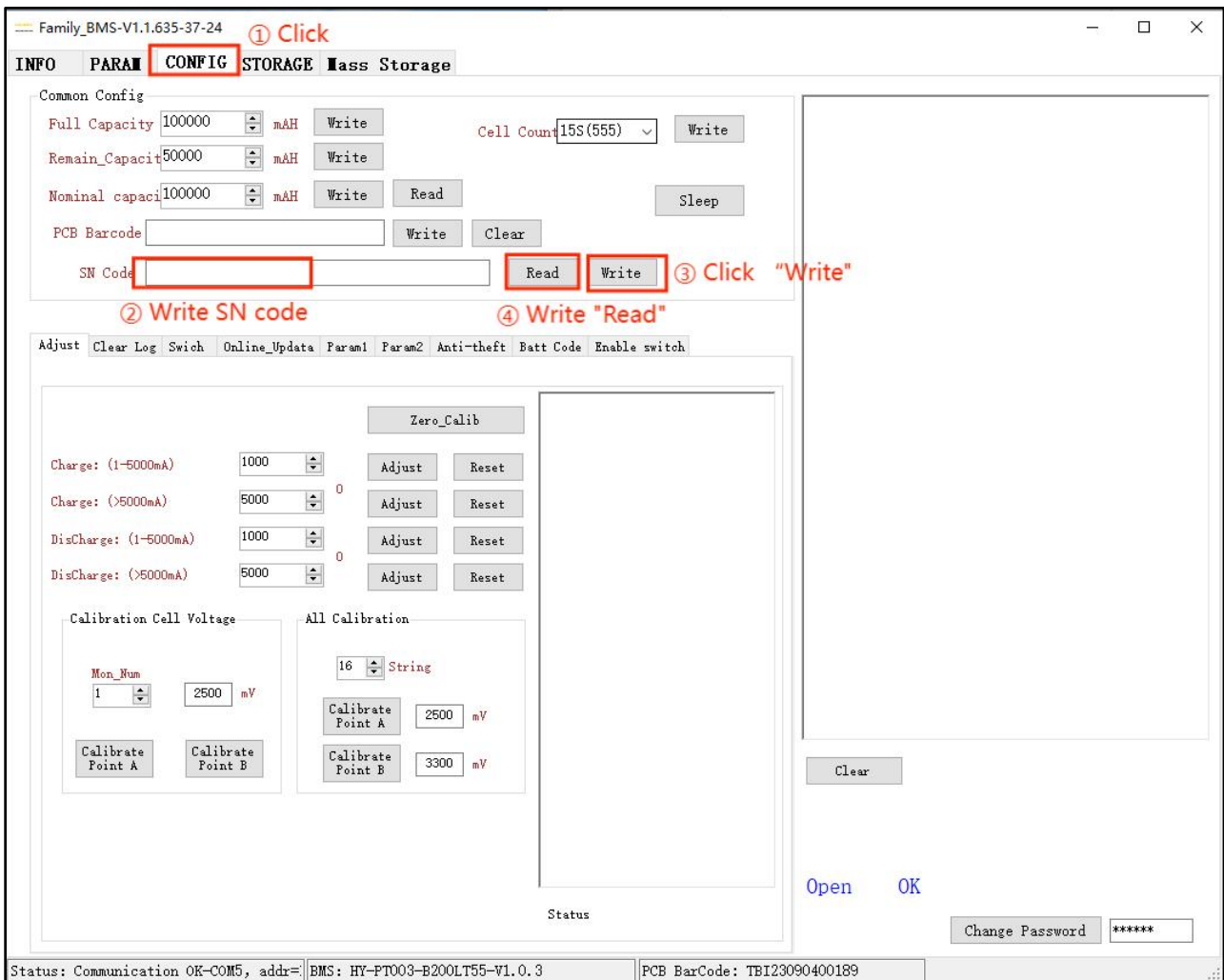
Status: Communication OK-COM5, addr= BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TBI23090400189

④ Communication anti-theft function is turned off

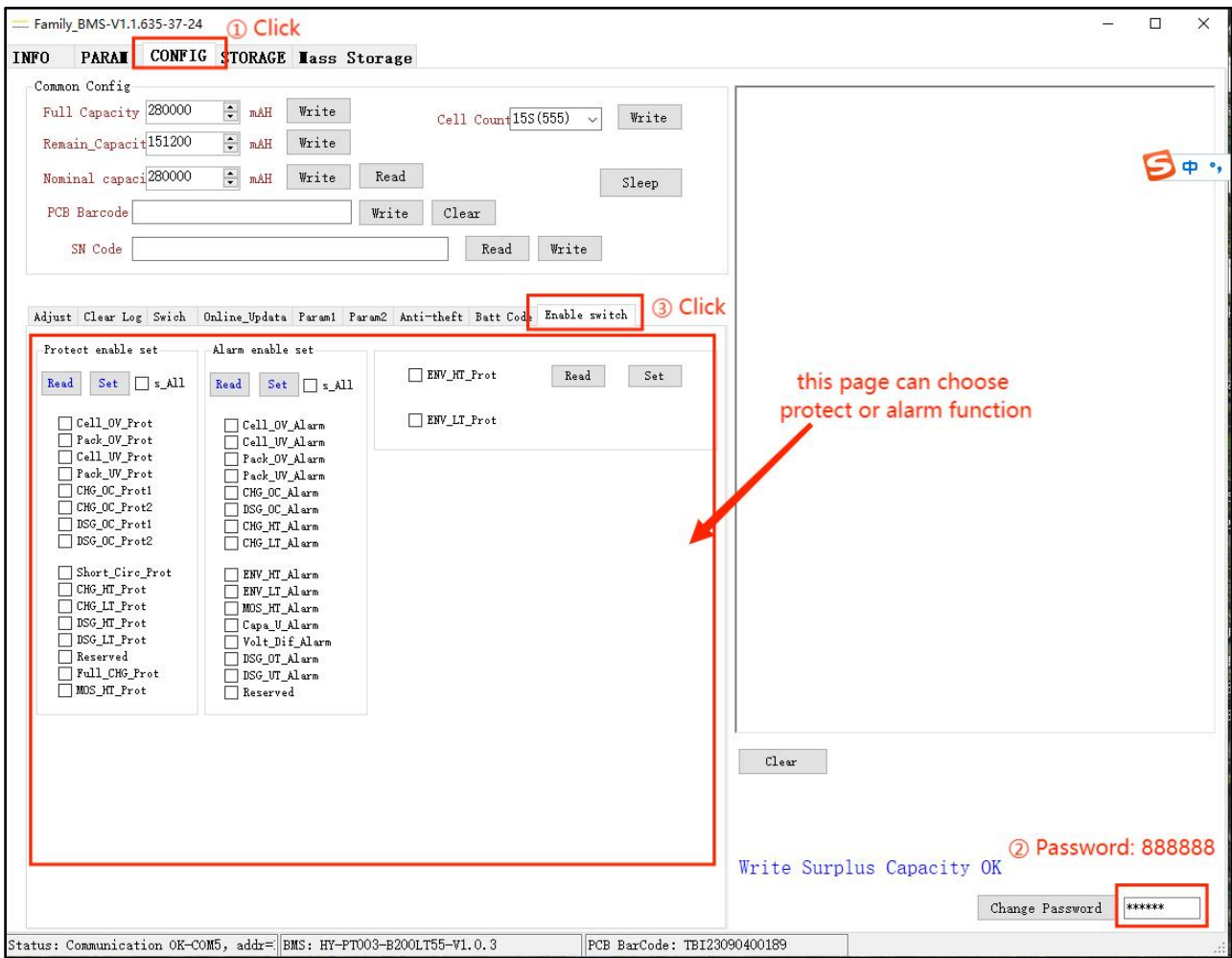


### 4.5.7 Write to the battery SN CODE

Note: Write SN code is usually written in the SN code part.



### 4.5.8 Opening and closing of the protection and alarm functions



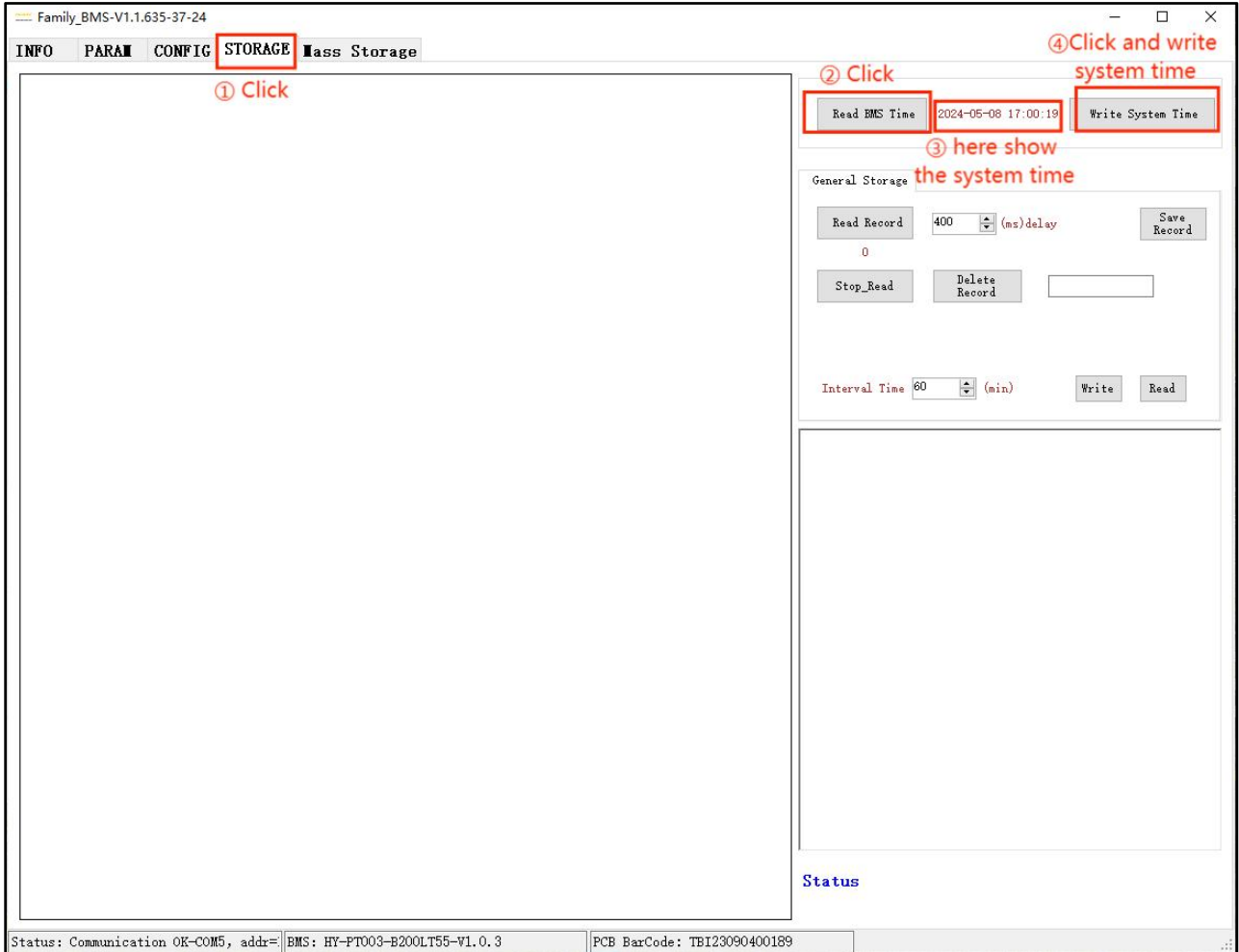


## 4.6 "STORAGE" INTERFACE FUNCTION SETTING

These functions include reading historical data, clearing historical data, exporting historical data, setting the storage interval time and other functions.

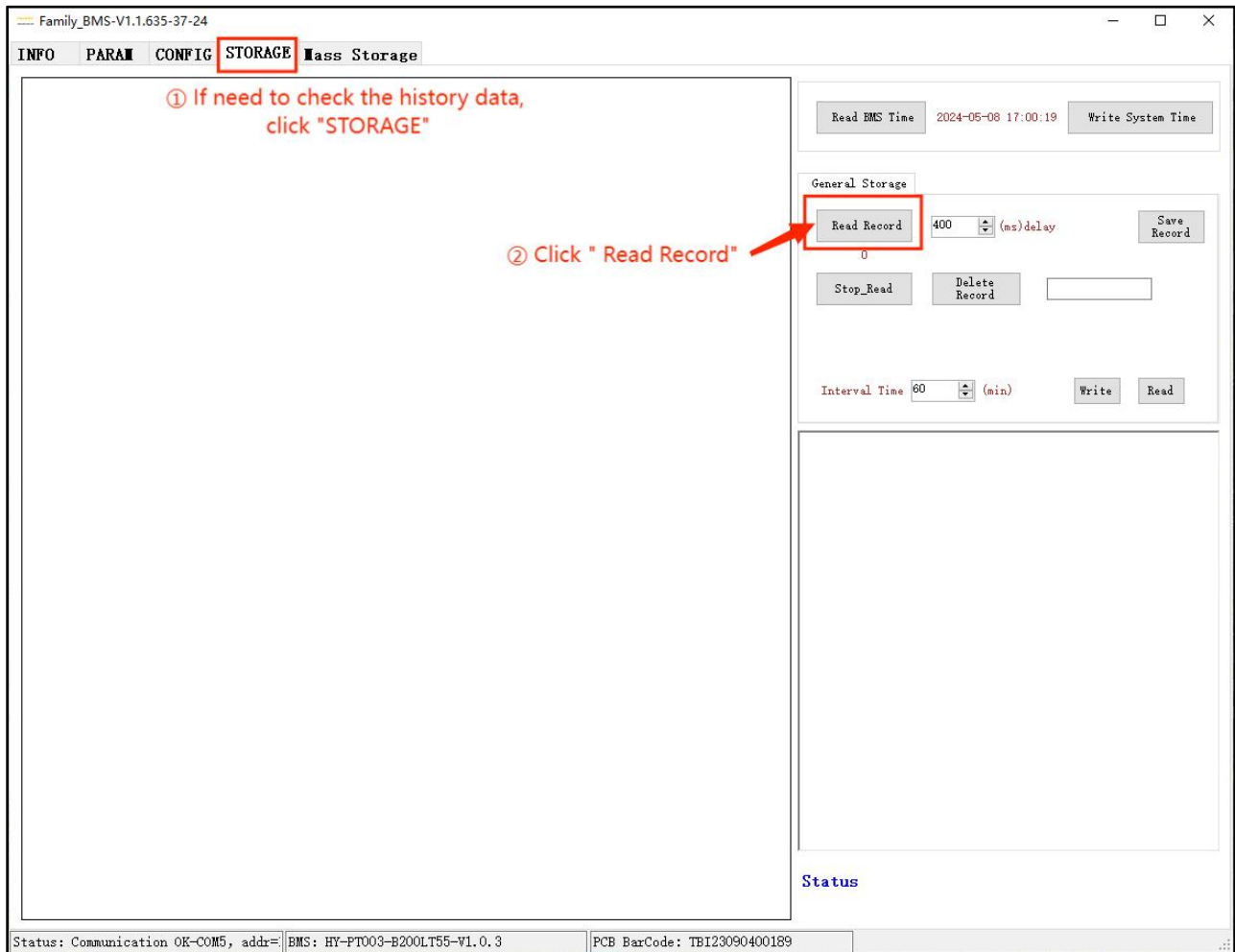
### 4.6.1 Read and write for the system time

Note: If the displayed system time is inconsistent with the computer time, manually calibrate by clicking 'Write System Time'. Ensure the computer time for the upper monitor system is accurate.



## 4.6.2 Reading of historical data

Note: If you need to read the complete historical data, you can only click the "Read Record" button once. Please wait patiently. After the data reading is completed, "Read Storage Record End" will be displayed.



"Read stored data Record" will appear.

Family\_BMS-V1.1.635-37-24

INFO PARAM CONFIG STORAGE **Mass Storage**

ID	Time	Alarm Code	PCB_Code	Pack_Code	Cell Count	CELL01	CELL02	CI
1	2024-05-09 14.20.51	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	32
2	2024-05-09 13.21.51	Timing record	TBI23090400189	BASEN-TEST1	16	3292	3295	32
3	2024-05-09 12.22.51	Timing record	TBI23090400189	BASEN-TEST1	16	3294	3295	32
4	2024-05-09 11.23.51	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
5	2024-05-08 18.49.54	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3294	32
6	2024-05-08 18.41.32	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
7	2024-05-08 18.41.23	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
8	2024-05-08 18.10.43	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	32
9	2024-05-08 16.44.19	Start system occurs	TBI23090400189	BASEN-TEST1	16	3292	3295	32
10	2024-05-08 13.50.53	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
11	2024-05-08 13.47.45	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
12	2024-05-08 11.29.27	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
13	2024-05-08 11.08.29	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
14	2024-05-06 19.59.29	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
15	2024-05-06 19.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	32
16	2024-05-06 18.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	32
17	2024-05-06 17.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	32
18	2024-05-06 16.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3295	32
19	2024-05-06 15.30.49	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
20	2024-05-05 10.22.33	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
21	2024-05-05 10.21.25	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
22	2024-04-30 10.22.00	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
23	2024-04-30 10.20.45	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3296	32
24	2024-04-29 13.58.47	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
25	2024-04-29 13.56.32	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3296	32
26	2024-04-18 17.56.10	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3296	32
27	2024-04-18 17.56.10	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3296	32
28	2024-04-18 17.06.34	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3296	32
29	2024-04-18 17.06.25	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32
30	2024-04-17 14.59.48	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	32
31	2024-04-17 14.47.12	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	32

Read EMS Time 2024-05-09 11:29:38 Write System Time

General Storage

Read Record 400 (ms) delay Save Record

35

Stop\_Read Delete Record

Interval Time 60 (min) Write Read

If showing " Reading storage recod",  
it means the opeartion not finished yet.  
Please wait patiently

↓

Reading storage record

Status: Communication OK-COM5, addr=BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TBI23090400189

### 4.6.3 Conservation of historical data

To save the complete historical data, please perform the operation as shown in the figure below.

The screenshot displays the 'Mass Storage' configuration window. On the left is a table of historical events, and on the right are control panels for reading and writing data.

ID	Time	Alarm Code	PCB_Code	Pack_Code	Cell Count	CELL01	CELL02	CELL03	CELL04	CR1
1	2024-05-08 16.44.19	Start system occurs	TB123090400189	BASEN-TEST1	16	3292	3295	3292	3293	329
2	2024-05-08 13.50.53	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3293	3294	329
3	2024-05-08 13.47.45	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3292	3292	329
4	2024-05-08 11.29.27	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3293	3293	329
5	2024-05-08 11.06.29	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3294	329
6	2024-05-06 19.59.29	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3291	3293	329
7	2024-05-06 19.30.49	Timing record	TB123090400189	BASEN-TEST1	16	3293	3294	3292	3292	329
8	2024-05-06 18.30.49	Timing record	TB123090400189	BASEN-TEST1	16	3293	3294	3292	3293	329
9	2024-05-06 17.30.49	Timing record	TB123090400189	BASEN-TEST1	16	3293	3294	3292	3293	329
10	2024-05-06 16.30.49	Timing record	TB123090400189	BASEN-TEST1	16	3293	3295	3292	3293	329
11	2024-05-06 15.30.49	Start system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3294	3294	329
12	2024-05-05 10.22.33	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3293	3293	329
13	2024-05-05 10.21.25	Start system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3293	3294	329
14	2024-04-30 10.22.00	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3295	329
15	2024-04-30 10.20.45	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3293	3293	329
16	2024-04-29 13.58.47	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3294	329
17	2024-04-29 13.56.32	Start system occurs	TB123090400189	BASEN-TEST1	16	3293	3296	3292	3294	329
18	2024-04-18 17.56.10	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3296	3293	3294	329
19	2024-04-18 17.56.10	Start system occurs	TB123090400189	BASEN-TEST1	16	3293	3296	3293	3294	329
20	2024-04-18 17.06.34	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3292	3293	329
21	2024-04-18 17.06.25	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3294	329
22	2024-04-17 14.59.48	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3293	3293	329
23	2024-04-17 14.47.12	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3293	329
24	2024-04-17 14.41.19	Exit system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3292	3294	329
25	2024-04-17 14.20.36	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3293	3293	329
26	2024-04-16 14.18.06	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3294	329
27	2024-04-16 14.17.34	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3293	3294	329
28	2024-04-16 14.17.25	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3294	3293	3294	329
29	2024-04-16 14.15.58	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3294	3294	329
30	2024-04-15 11.48.59	Exit system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3293	329
31	2024-04-15 11.47.01	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3295	3293	3293	329
32	2024-04-15 11.34.35	Start system occurs	TB123090400189	BASEN-TEST1	16	3294	3296	3293	3294	329
33	2024-04-08 19.13.51	Start system occurs	TB123090400189	BASEN-TEST1	16	3293	3295	3294	3294	329

**Control Panels:**

- Read EMS Time:** 2024-05-08 17:10:29
- Write System Time:** [Button]
- General Storage:**
  - Read Record:** [Button]
  - Delay:** 400 (ms)
  - Save Record:** [Button]
  - Stop\_Read:** [Button]
  - Delete Record:** [Button]
  - Interval Time:** 59 (min)
  - Write:** [Button]
  - Read:** [Button]

**Annotations:**

- ② Click here to save record (points to Save Record button)
- ① if needs completed history data, wait for showing as below. (points to the table)
- To read the stored record end (points to the Read button)

**Status Bar:** Status: Communication OK-COM5, addr=BMS: HY-PT003-B200LT55-V1.0.3 PCB BarCode: TB123090400189

### 4.6.4 Interval modification

The screenshot shows the 'Mass Storage' interface of the Family\_BMS-V1.1.635-37-24 software. It features a data table on the left and control panels on the right.

ID	Time	Alarm Code	PCB_Code	Paok_Code	Cell Count	CELLO1	CELLO2	CELLO3	CELLO4	CELLO5
1	2024-05-08 16.44.19	Start system occurs	TBI23090400189	BASEN-TEST1	16	3292	3295	3292	3293	3293
2	2024-05-08 13.50.53	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3293	3294	3291
3	2024-05-08 13.47.45	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	3292	3292	3292
4	2024-05-08 11.29.27	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3293	3293	3292
5	2024-05-08 11.08.29	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	3293	3294	3292
6	2024-05-06 19.59.29	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3291	3293	3291
7	2024-05-06 19.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	3292	3292	3291
8	2024-05-06 18.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	3292	3293	3292
9	2024-05-06 17.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3294	3292	3293	3292
10	2024-05-06 16.30.49	Timing record	TBI23090400189	BASEN-TEST1	16	3293	3295	3292	3293	3292
11	2024-05-06 15.30.49	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3294	3294	3292
12	2024-05-05 10.22.33	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3293	3293	3292
13	2024-05-05 10.21.25	Start system occurs	TBI23090400189	BASEN-TEST1	16	3293	3295	3293	3294	3293
14	2024-04-30 10.22.00	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	3293	3295	3291
15	2024-04-30 10.20.45	Start system occurs	TBI23090400189	BASEN-TEST1	16	3294	3296	3293	3293	3292
16	2024-04-29 13.58.47	Exit system occurs	TBI23090400189	BASEN-TEST1	16	3294	3295	3293	3294	3293

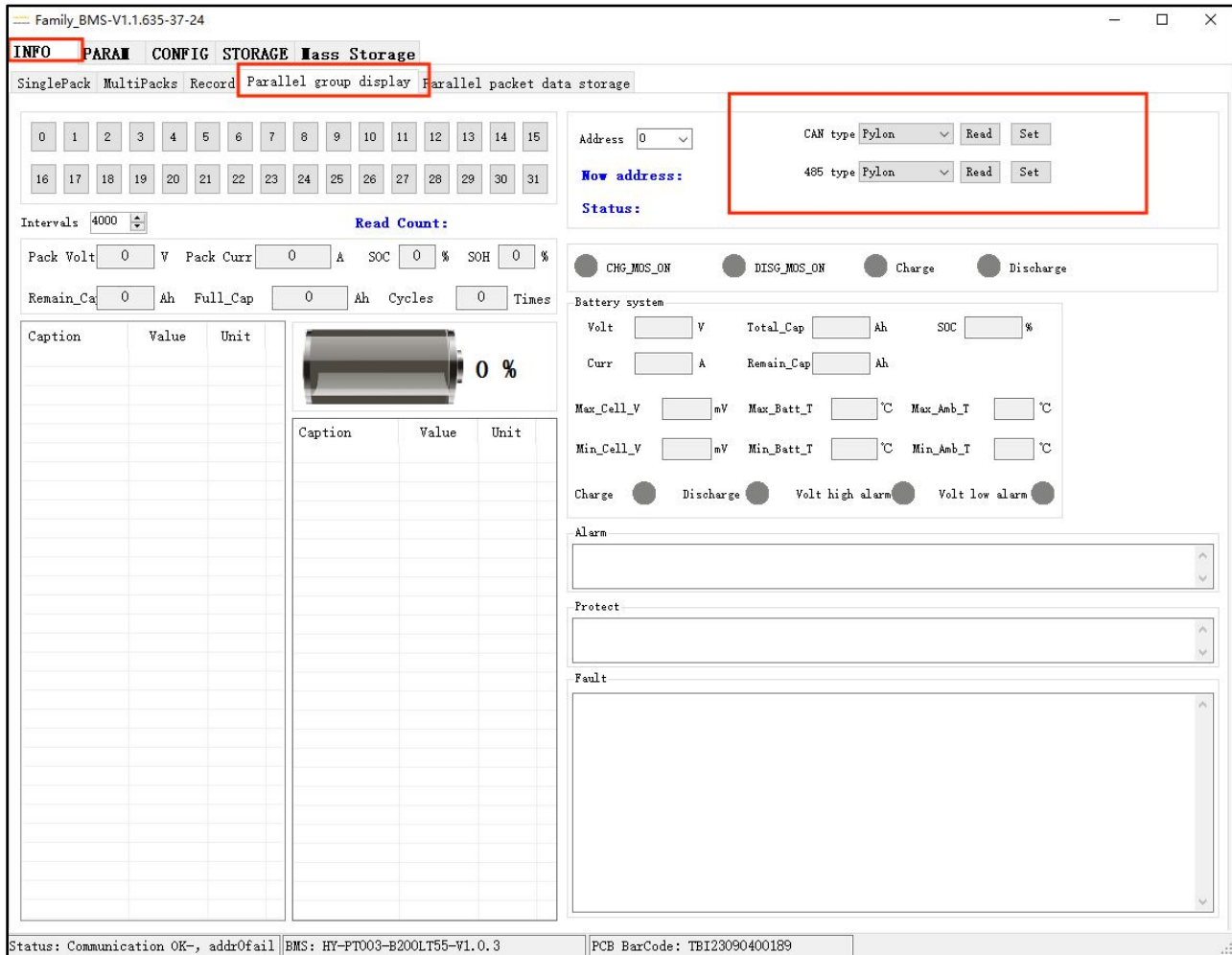
**Right Panel Controls:**

- Read EMS Time:** 2024-05-08 17:10:29
- Write System Time:** [Button]
- General Storage:**
  - Read Record: 400 (ms) delay
  - Save Record: [Button]
  - 16
  - Stop\_Read: [Button]
  - Delete Record: [Button]
  - Interval Time: 59 (min)
  - Write: [Button]
  - Read: [Button]
- Annotations:**
  - ① write the interval time
  - ② Click "Write"
  - ③ Click "Read"
  - ④ Display below text indicates success
- Success Message:** Write the interval time of success

**Status Bar:** Status: Communication OK-, addrOfail | BMS: HY-PT003-B200LT55-V1.0.3 | PCB BarCode: TBI23090400189

### 4.6.5 The BMS inverter needs to be selected

In the "INFO" interface, open the "Parallel group display" and show that the customer sees the CAN type and 485 type, and selects the protocol according to their own needs to confirm the communication between BMS and the inverter



## 5. PRECAUTIONS FOR USE

1. Open the software by default to the operator management permission, can only do data reading and other functions, if you want to modify the parameters, then you want to log in the administrator permission first.
2. The software only supports the PC Windows system, and other platforms (Android or IOS) cannot run.
3. Before using the software, it is best to install office 2007 version above office 2007 to facilitate the data export into EXCEL table.
4. The above upper machine operation interface as a reference, different versions of the upper machine operation page will be different, the specific operation steps should be based on the actual operation interface.