

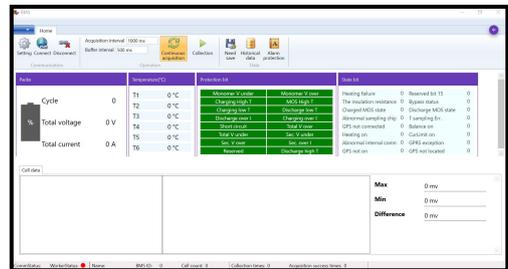
PROCEDURE			
Reference:	PR20220401-01		
Version:	01.1	Category:	E

MODEL(S)	GOAL	
All new type lithium battery pack	Quality improvement	
	Performance	√
	Upgrade	√
PARTS INFO	Down time	
Data transfer cable for Lithium battery interface software	Maintenance	√
	Work around	√
	<u>Others:</u>	

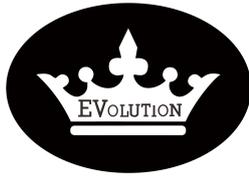
VERSION CONTROL:			
Author:	Version:	Date:	Change/update:
Arvin	01.1	2022/04/16	update

TITLE
How to reflash the BMS board by RS485 communications

TOOLS REQUIRED



- Laptop (Win 7 or up)
- Data transfer cable for Lithium battery interface software
- Lithium battery interface software



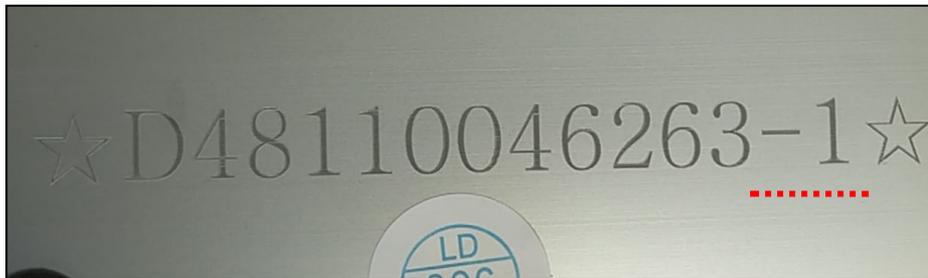
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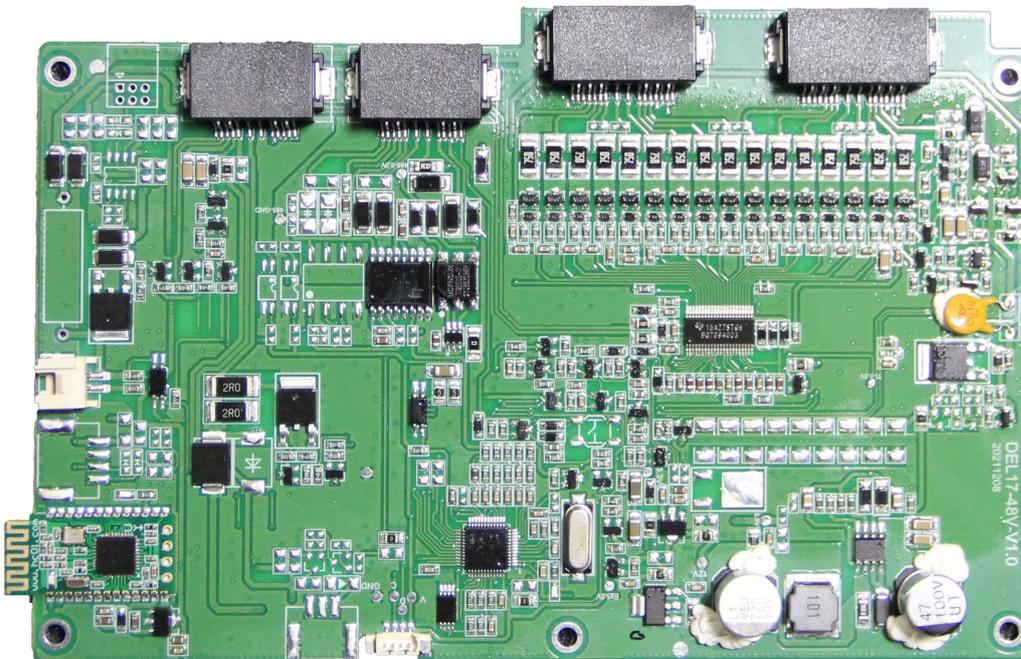
Note: Please read the information before conducting the procedures below

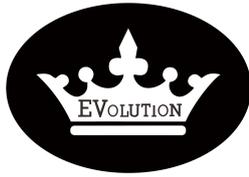
- These procedures only apply to the new type BMS board.
- How to distinguish the new type BMS board:

1. Check the battery serial number. The serial number of the lithium batteries which have new type BMS board will be ending with “-1”.



2. Inspect the BMS board connectors, see the image for new type BMS board.





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HOW TO DO?

1. Connect the “Data transfer cable” to the laptop and lithium battery.

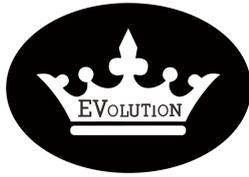


Connect it to battery positive terminal

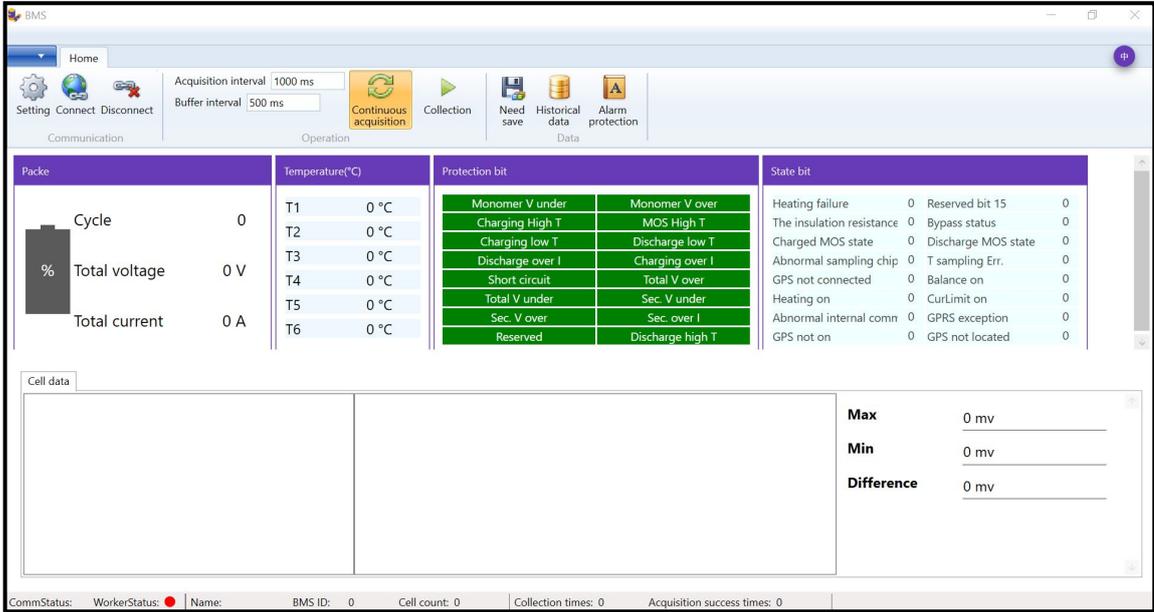
Connect it to battery RS485 port

2. Run the battery interface software **GBMS** by following the Procedures “**PR20211006-How to use Interface software for lithium battery-v02.0-EN-[E]**”



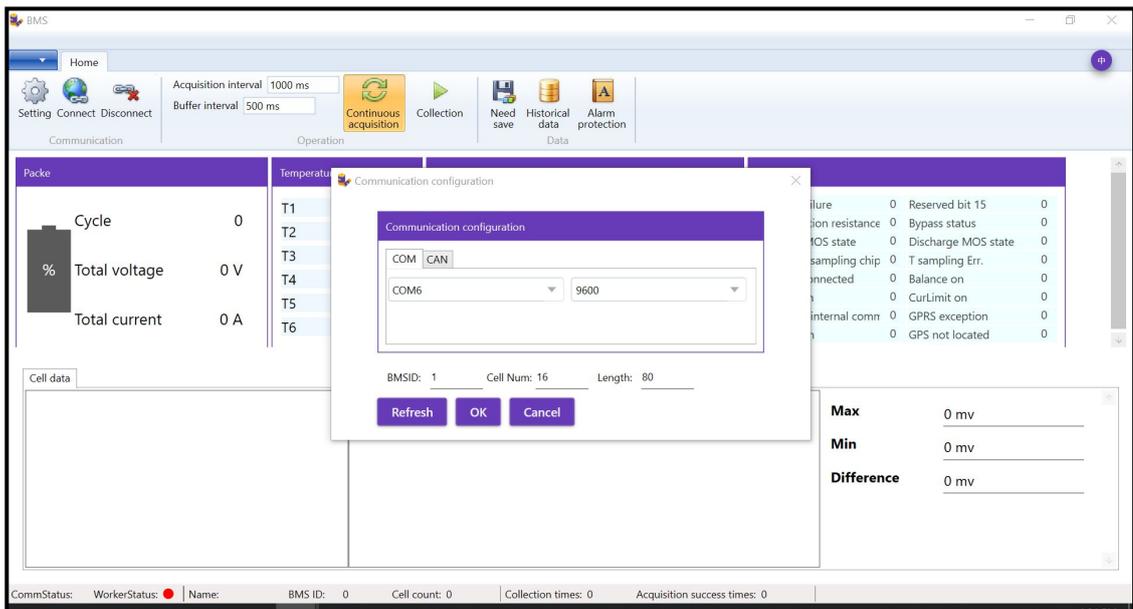


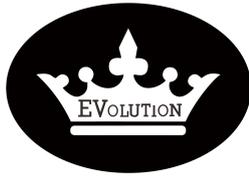
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3. Set the COM /BMSID/Cell Num/Length

- **COM:** The COM # depends on the laptop you are using.
- **BMSID:** 1
- **Cell Num:** 16
- **Length:** 80





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4. Click on the “Collection” icon to start reading the data from lithium battery BMS.

The screenshot shows the BMS software interface with the 'Collection' icon highlighted. The interface includes a top navigation bar with 'Home', 'Setting', 'Connect', and 'Disconnect'. Below this, there are sections for 'Operation' (with 'Continuous acquisition' and 'Collection' icons), 'Data' (with 'Need save', 'Historical data', and 'Alarm protection' icons), and a main data display area. The main display area is divided into four columns: 'Packe', 'Temperature(°C)', 'Protection bit', and 'State bit'. The 'Packe' column shows 'Cycle' at 0, 'Total voltage' at 53.3 V, and 'Total current' at 0 A. The 'Temperature(°C)' column shows temperatures for T1 through T6. The 'Protection bit' column shows various protection status indicators. The 'State bit' column shows various state indicators. Below the main display area, there is a 'Cell data' section with a table of cell voltages and a bar chart showing the voltage distribution for 16 cells. The bar chart shows a maximum voltage of 3336 mV and a minimum voltage of 3323 mV, with a difference of 13 mV.

5 Click “other” menu on the top left corner of interface.

The screenshot shows the BMS software interface with the 'Other' menu highlighted. The interface includes a top navigation bar with 'Home' and 'Other' menus. Below this, there are sections for 'UART Download', 'CAN Download', and 'Burn program'. The main data display area is divided into four columns: 'Packe', 'Temperature(°C)', 'Protection bit', and 'State bit'. The 'Packe' column shows 'SOH' at 99.9%, 'Circle' at 3, 'Total voltage' at 53.3 V, and 'Total current' at 0 A. The 'Temperature(°C)' column shows temperatures for T1 through T6. The 'Protection bit' column shows various protection status indicators. The 'State bit' column shows various state indicators. Below the main display area, there is a 'Cell data' section with a table of cell voltages and a bar chart showing the voltage distribution for 16 cells. The bar chart shows a maximum voltage of 3334 mV and a minimum voltage of 3327 mV, with a difference of 7 mV. The interface also displays various status indicators at the bottom, including 'CommStatus', 'WorkerStatus', 'Name', 'BMS ID', 'Cell count', 'Collection times', and 'Acquisition success times'.



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6. Click "UART Download" button and then select "Yes" on the pop-up dialogs.

CommStatus: ● WorkerStatus: ● Name: COM3 BMS ID: 1 Cell count: 16 Collection times: 10 Acquisition success times: 9

Note: Make sure select " 115200" on BaudRate

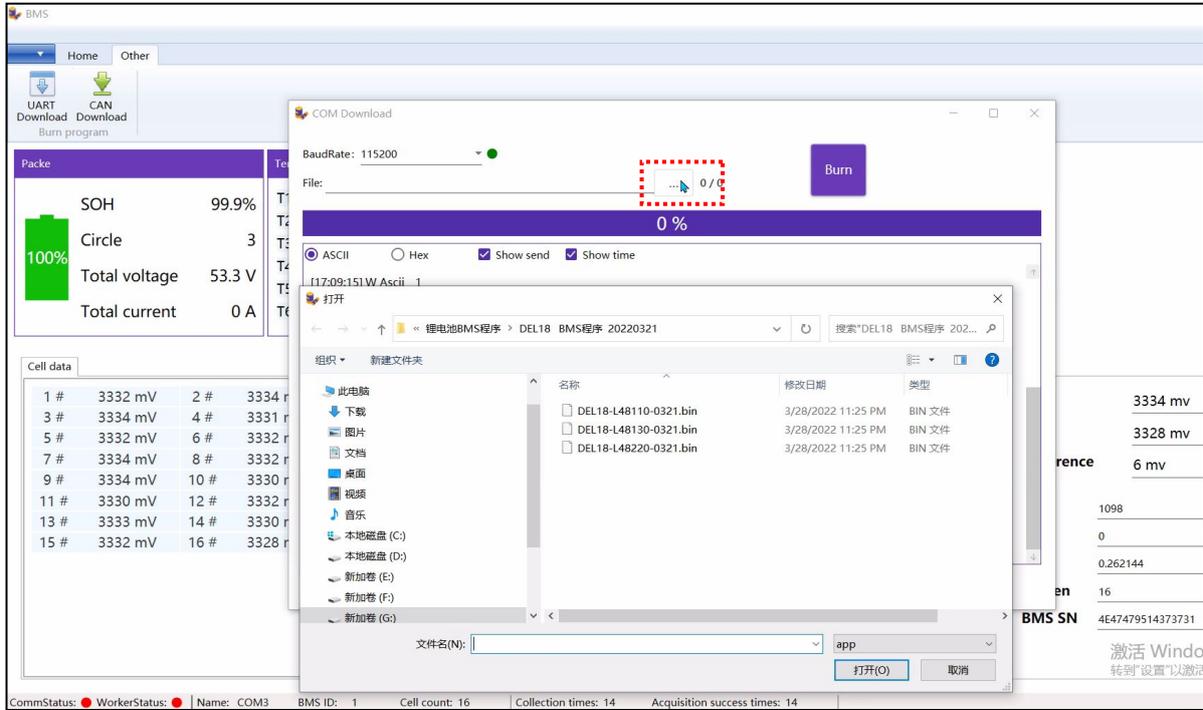
Rest Enter BOOT Run APP Aborted Ready to download

CommStatus: ● WorkerStatus: ● Name: COM3 BMS ID: 1 Cell count: 16 Collection times: 14 Acquisition success times: 14

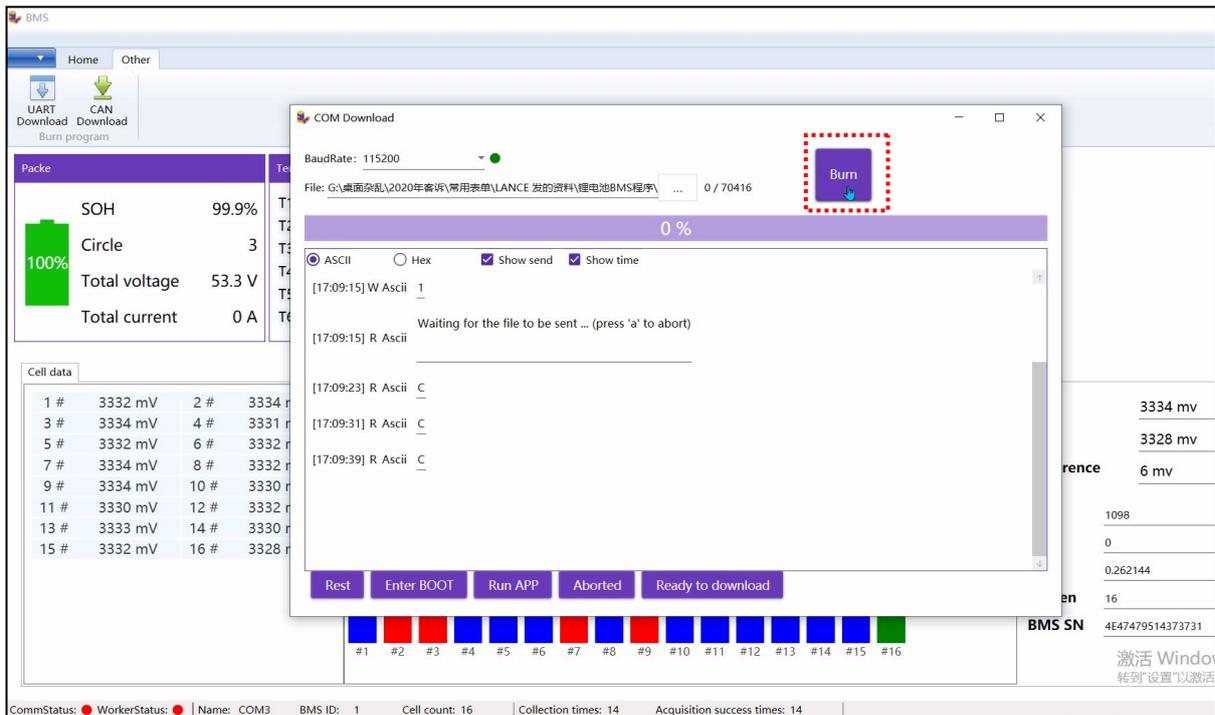


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7 Click the file “...” button to select the proper firmware for your lithium battery.



8 Click the “Burn” button to download the firmware to the BMS board.

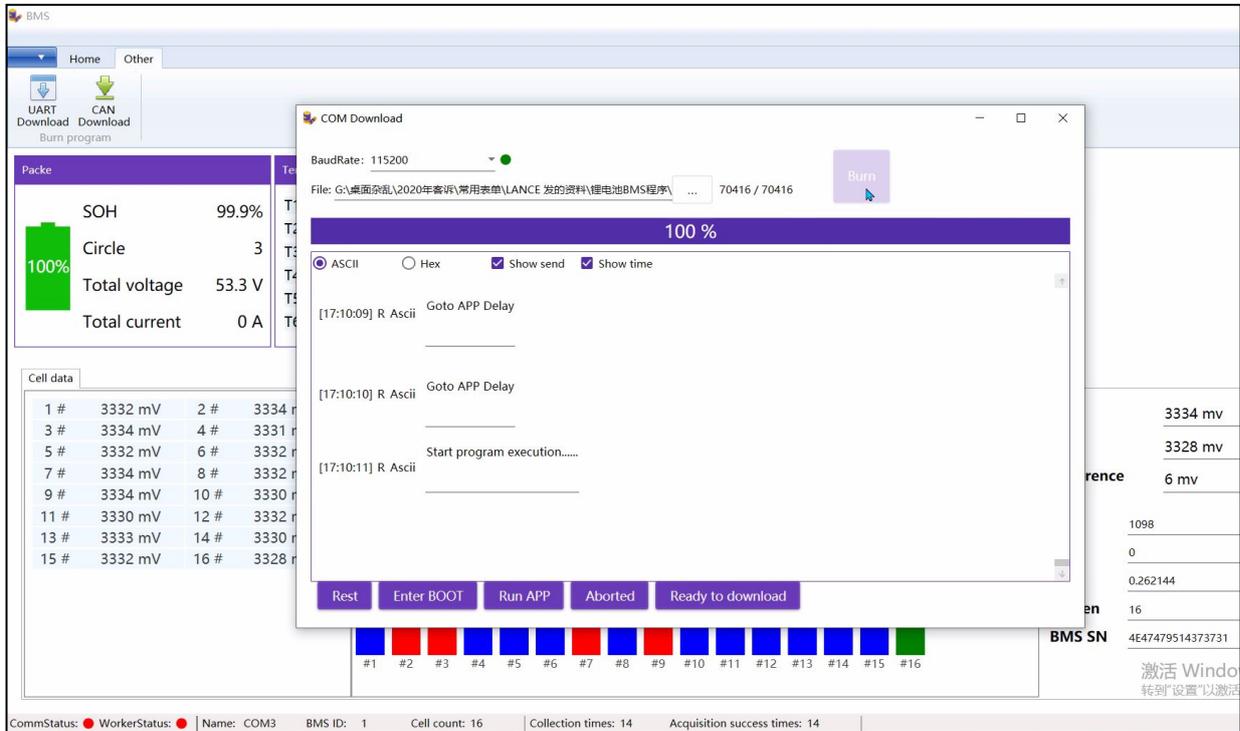




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9. When the progress bar shows 100%, the reflashing progress is completed. Turn off the interface software.



10. Cycle the key switch and then charge the lithium battery fully.

Note: Must fully charge the lithium battery after re-programming/reflashing the BMS.



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