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1 General information

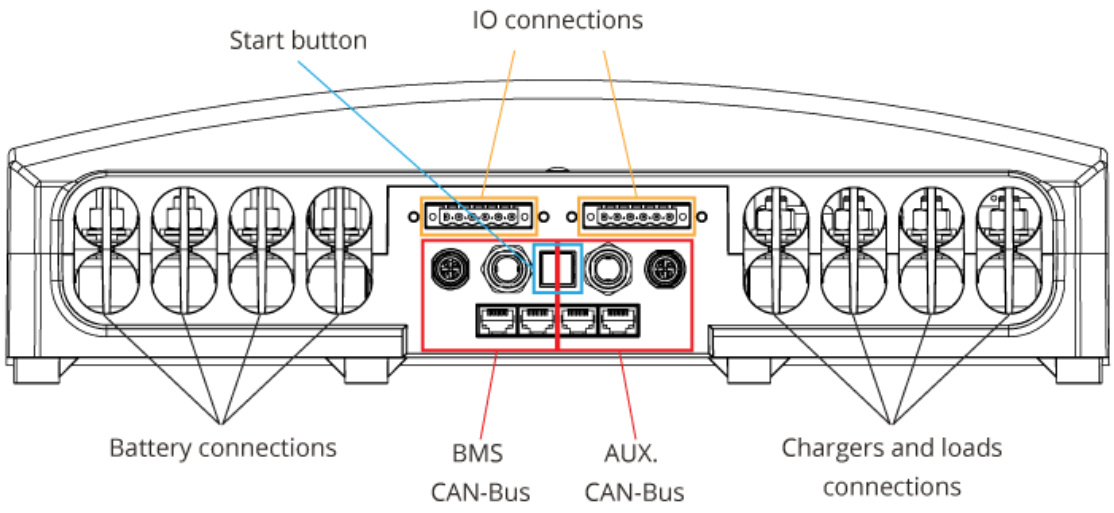
With the Lynx Ion BMS tool it is possible to read all the inside information from the battery systems. This information contains all the individual cell voltages, temperatures, current etc.

The Lynx Ion BMS tool is only supported by windows 7 or 10 operating systems.
When problems with starting the tool, check if your .NET Framework is up to date.

1.1 Connecting the Lynx Ion BMS to a laptop or PC

The Lynx Ion BMS tool has to be used in combination with a CAN to USB interface. Supported are the Victron Energy CANUSB interface, Kvaser, PEAK-System PCAN-USB and the MG USB CAN interface.

1. Connect the CAN to USB interface to the BMS CAN-Bus of the Lynx Ion BMS.

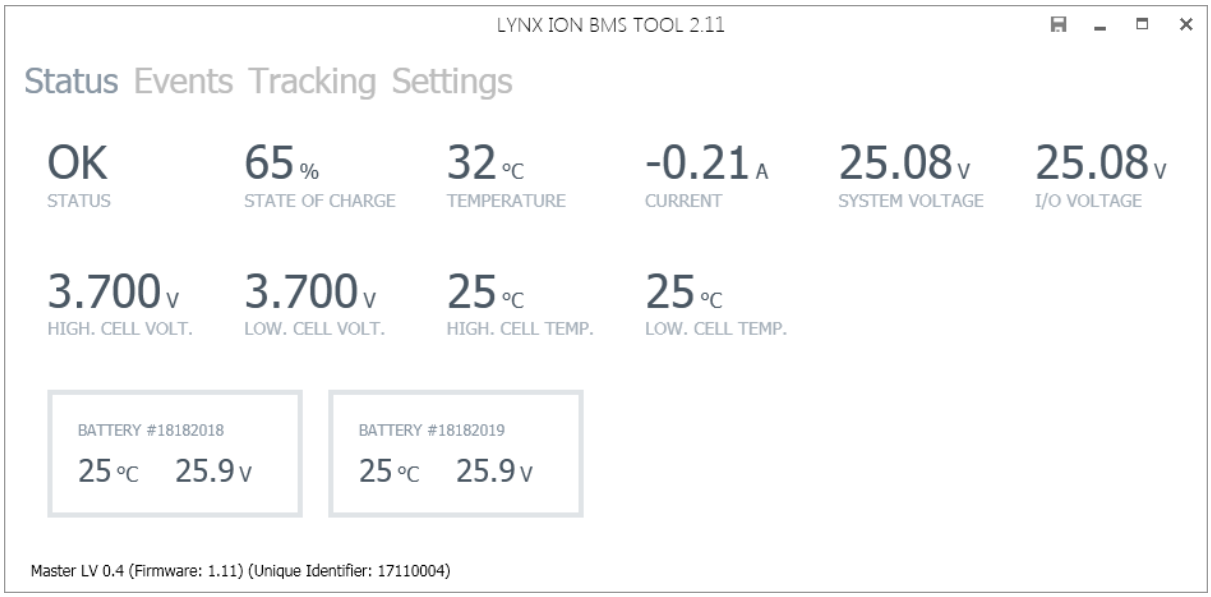


2. Connect the USB to the laptop or PC and start the Lynx Ion BMS Tool. The tool will recognize the CAN to USB interface automatically and will connect to the system. When more than one interface active, select the corresponding interface.
3. Make sure you turn on the Lynx Ion BMS.

When necessary the firmware of the Lynx Ion BMS and batteries will be updated.

1.2 Status

The main status of the system is shown in the status screen.



Detailed information will pop up by moving the cursor over the different widgets.

1.3 Events

The Lynx Ion BMS stores event information with daily reports and special events that occurred, this information can be read and saved. To save the information click with the right mouse button on a random message and a popup will appear with the option "Save to file..."

1.3.1 List of events that will be logged

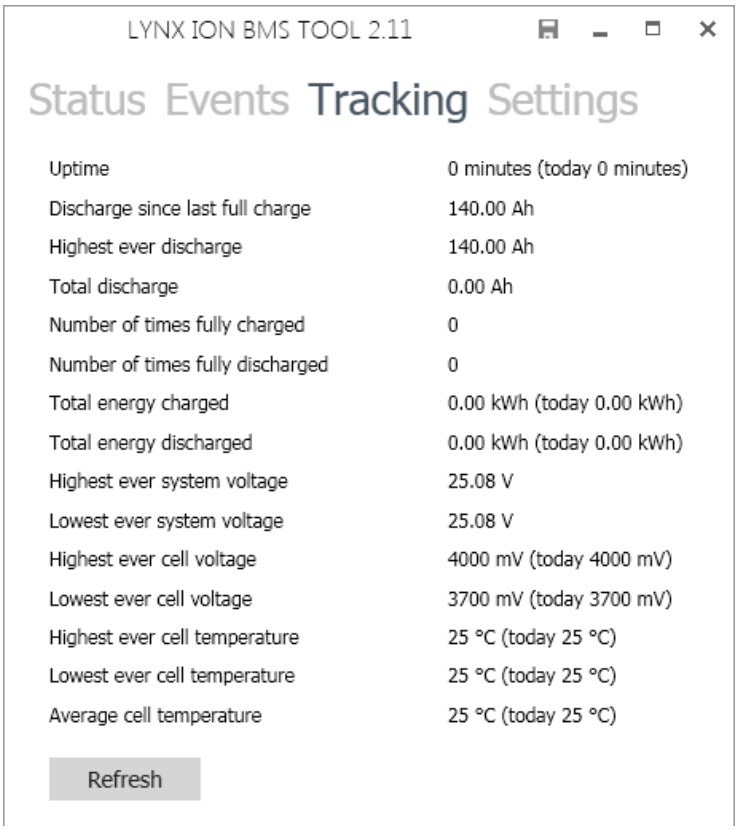
Event logging list:

- Daily reports will be stored with the following information:
  - Uptime, energy charged, energy discharged, average cell temperature, highest cell voltage, lowest cell voltage, highest cell temperature, lowest cell temperature.
- Information events.
- Failsafe events (=main contactor open).

1.4 Tracking

The Lynx Ion BMS keeps track of the following values:

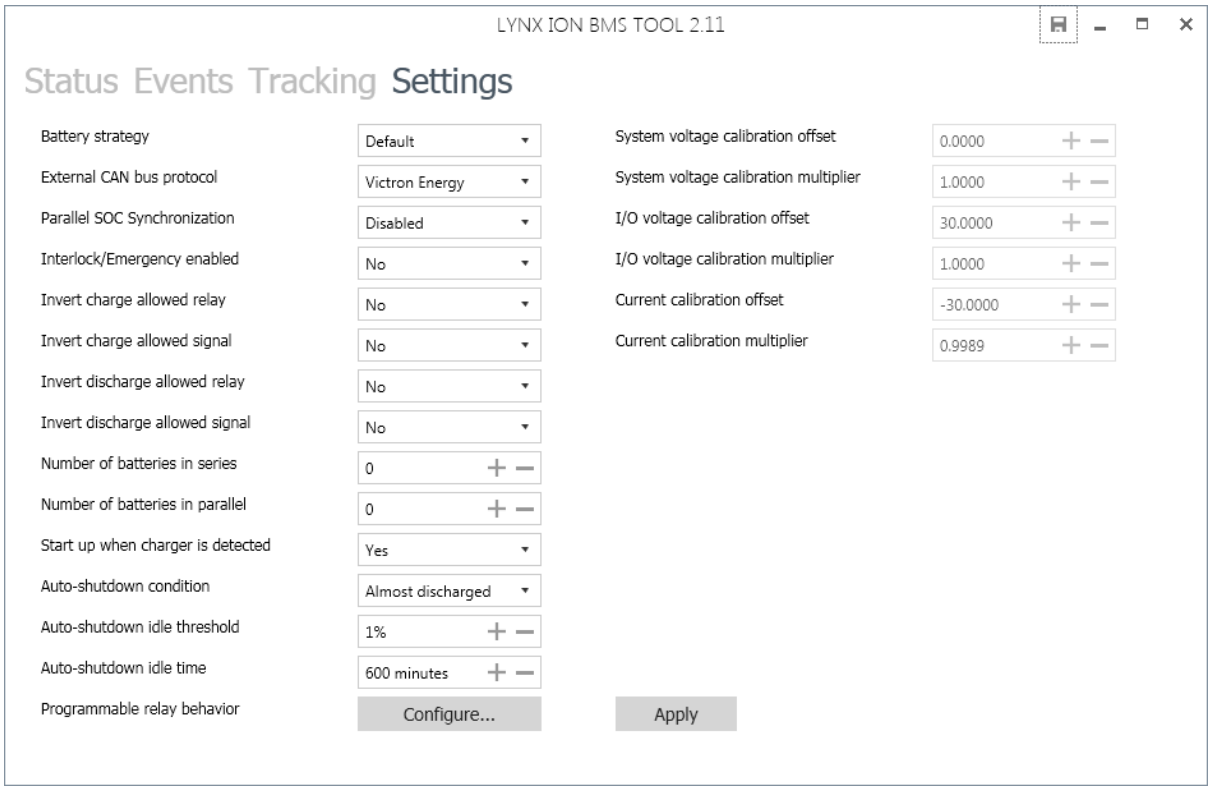
- Uptime (minutes)
- Discharge since last full charge (Ah)
- Highest ever discharge (Ah)
- Total discharge (Ah)
- Number of times fully charged
- Number of times fully discharged
- Total energy charged (kWh)
- Total energy charged today (kWh)
- Total energy discharged (kWh)
- Total energy discharged today (kWh)
- Highest ever system voltage (V)
- Lowest ever system voltage (V)
- Highest ever cell voltage (mV)
- Highest ever cell voltage today (mV)
- Lowest ever cell voltage (mV)
- Lowest ever cell voltage today (mV)
- Highest ever cell temperature (°C)
- Highest ever cell temperature today (°C)
- Lowest ever cell temperature (°C)
- Lowest ever cell temperature today (°C)
- Average cell temperature (°C)
- Average cell temperature today (°C)



This tracking information can be cleared on request.

1.5 Settings

It is possible to change settings of the Lynx Ion BMS. For example set the number of batteries in series and in parallel. After settings have been changed a reboot of the Lynx Ion BMS is required.



2 Change Settings

For changing settings of the Lynx Ion BMS it is required to have a fully operating system connected to the PC / laptop by a USB CAN Interface. The software is only supported by windows 7 or 10 operating systems.

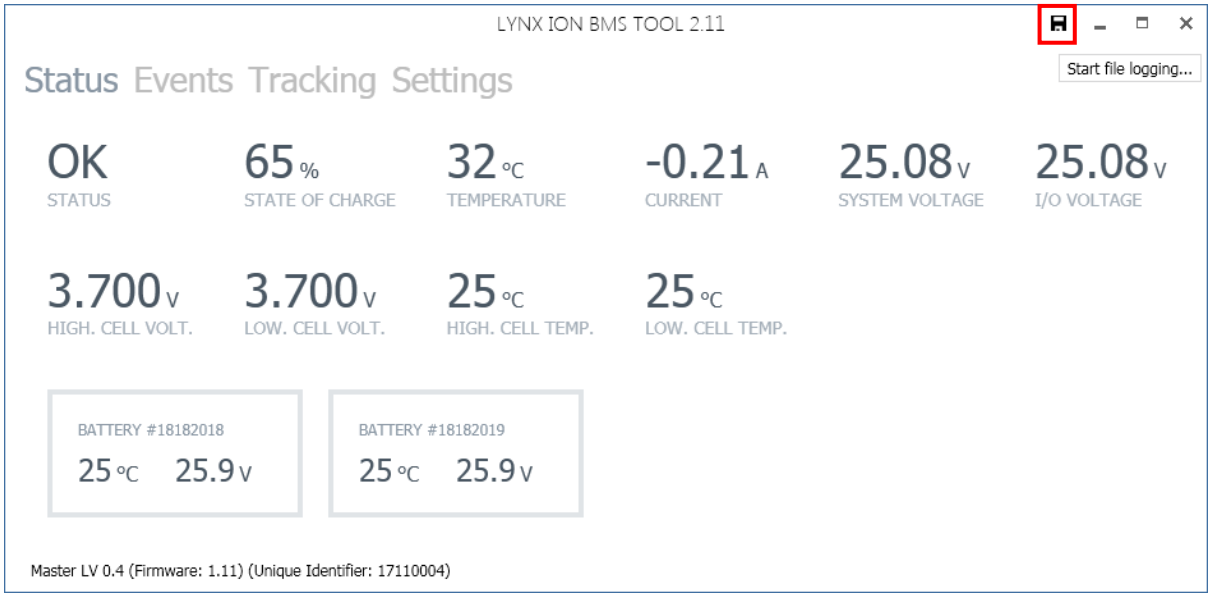
The USB CAN interface has to be connected to the Battery CAN-bus. This can be done somewhere at the batteries or directly to the Lynx Ion BMS. On the Lynx Ion BMS it is one of the two left side CAN-RJ45 connectors.

Once the tool is connected, go to the tab Settings. Change the required setting and press the Apply button. Now the settings or changed and stored in the Lynx Ion BMS. Before settings become active the unit need to be restarted.

3 Data logging

The data of a running system can be logged by the diagnostic tool.

To start logging click the disk icon on the right top of the diagnostic tool window. After clicking the icon will turn red which indicates that logging is in progress. This log file can be send to the service desk for analyzing.



4 Updating Firmware

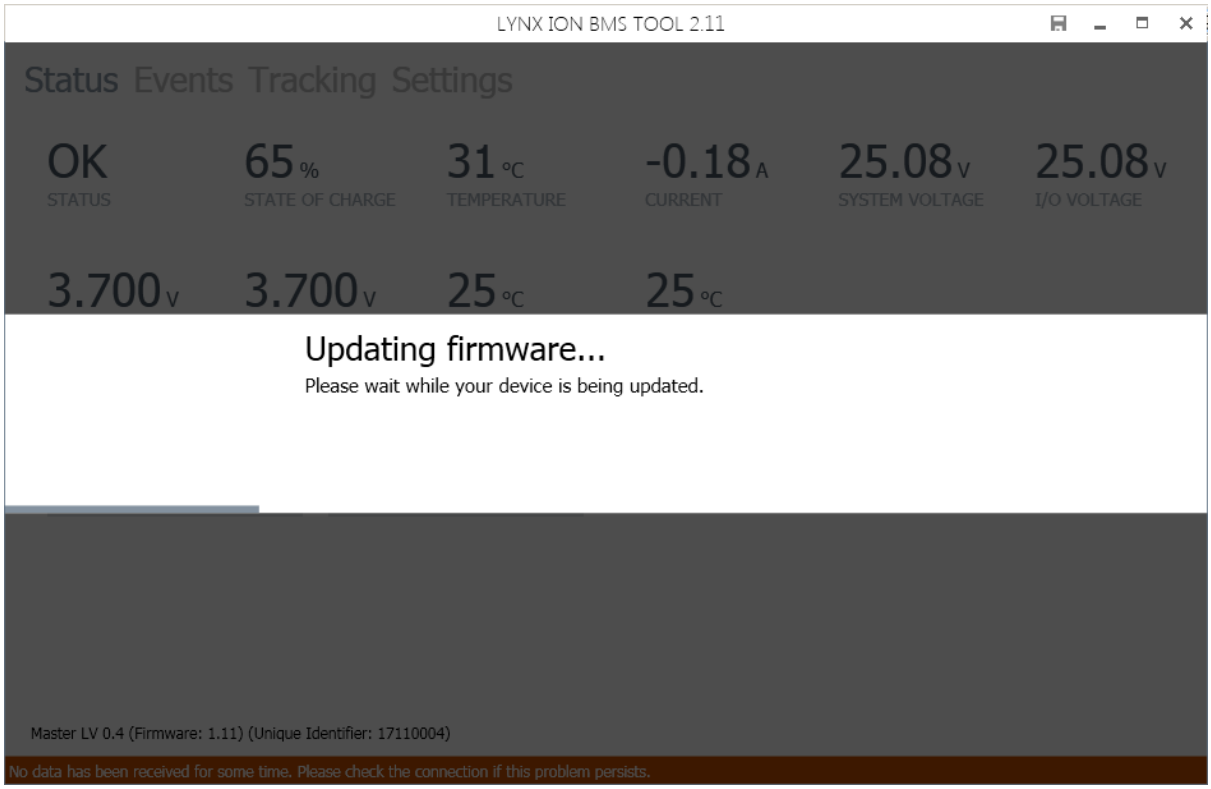
The tool can update the firmware of the Lynx Ion BMS. It will automatically check if the Lynx Ion BMS has the latest release firmware. To check if you have the latest release of the Lynx Ion BMS tool, contact your supplier.

When there is new firmware available, the tool will ask if you want to update the Lynx Ion BMS. Always update to the latest release. When the Lynx Ion BMS already has the latest firmware release it will start directly.

Note: when you are going to update, the Lynx Ion BMS will shut down!

Once the firmware is updated, the Lynx Ion BMS will start automatically again. It is possible that there is a new firmware version for the batteries. The Lynx Ion BMS will update the batteries automatically, this can take a few minutes depending on the amount of batteries connected.

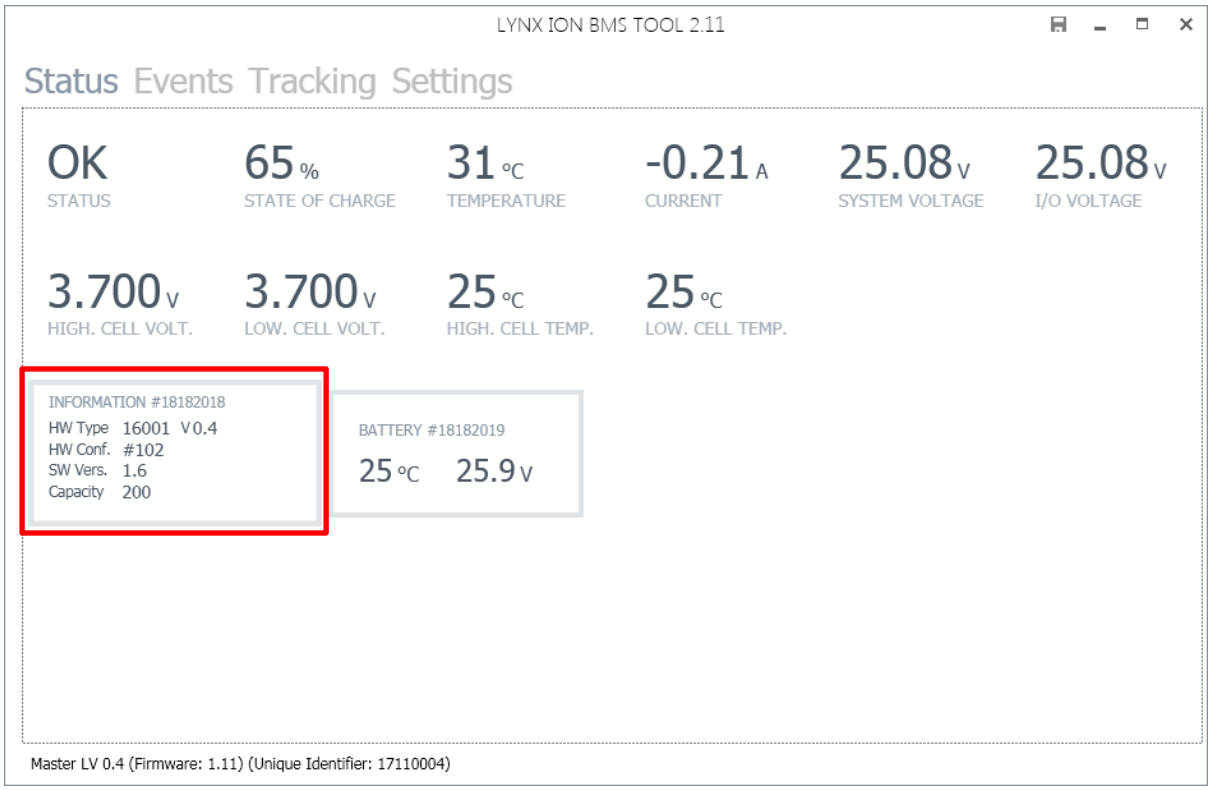
If the system is running with the new firmware, check if the settings are still correct. It could be possible that new settings has appeared, check and change if needed.



5 Battery information and identification

Details of a battery module can be shown by clicking on a specific battery with the mouse button while holding CTRL.

The following information will appear:

- HW Type: Hardware type and hardware version
- HW Conf.: Hardware configuration number
- SW Vers.: Software version of battery module
- Capacity: Capacity of the battery module in Ah

This action also triggers the specific battery to turn on the red status LED for one minute. In this way the specific battery module can be located physically.