

**123\SmartBMS** to USB

# Manual

Rev 1



The 123\SmartBMS to USB cable is a handy cable which can be used to display BMS data on the Victron Cerbo/Venus or for custom 123\SmartBMS projects like on the Raspberry Pi.

### **Safety**

To avoid any problems with ground differences, the BMS signal is isolated from the USB signal.

### **Installation**

Installation is simple: just plug the two wires into the 123\SmartBMS End Board *Ext Out*. There is no polarity.

## Victron Cerbo integration

There is full integration with the 123\SmartBMS Victron Cerbo and Victron VRM. This enables monitoring of most important BMS data like SoC, current, power, pack voltage and more via a CCGX and/or Victron VRM.

Just plug the cable into the 123\SmartBMS End Board *Ext Out* and the USB into the Victron Cerbo. Download *venus-data.tar.gz* from [our website](#) and put it on a usb drive or SD card (do not extract). Plug this USB drive/SD card into the Cerbo and reboot the Cerbo. The software is now automatically copied. Reboot again for installation. If you do not see the BMS appear on the Cerbo, reboot again. You can remove the USB/SD card.

### **Important**

This project requires VenusOS 2.80 or higher. Make sure you update to the latest release (candidate) to get v2.80 or higher.

The USB cable can only be plugged into the two USB ports on the edge. The third USB port is a power port and cannot be used.

It is possible to connect multiple BMS to the Cerbo by giving each BMS it's own USB cable. The CCGX/console will display each BMS it's own data.

## Raspberry Pi projects

To speed up development of custom Raspberry Pi projects, we have developed code for the Raspberry Pi. This code connects to the BMS via the 123\SmartBMS to USB cable and can upload the BMS data to Thingspeak. For more installation instructions, please see our [Github](#).