

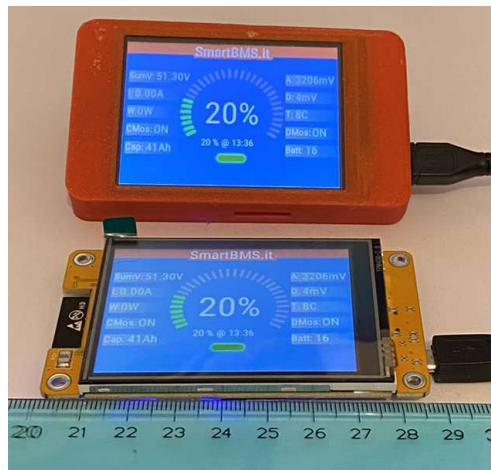
# CONFIGURE OPENHASP COLOR DISPLAY with ScanLabs Dongle

v1.1 02-25-2025

Following this basic manual, you will be able to build a colour-graphic display based on the [openHASP](#) project.

The Colour Display connects via Wi-Fi and MQTT to the MQTT broker you are using and will display major battery pack info.

**NOTE:** [openHASP](#) project does not support MQTT over TLS , if TLS is needed use [TASMOTA](#) project



Total project cost is about 15\$ ( for the display & enclosure )

Time to make it: 10 minutes (tanks to file exported by [ScanLabs](#) dongle)

Time to print stl: 2-3h (depending on you 3D printer )

## What you need:

- 1 or many\* [ScanLabs dongle/s](#) to extract DALY/JK BMS data and Publish to an MQTT server
- 1 or many\*\* [ESP32-2432S028r](#) -> Colour Display based on ESP32 – 2.8inches
- 1 or many\* Enclosure for the Colour Display
  - [Free STL option 1](#)
  - [Free STL option 2](#)
  - [Free STL option 3](#)

## Why 1 or many?

\*One display can show multiple Battery Pack on multiple Dashboards. Configure each battery pack to publish data on a dedicated Dashboard

\*\*Being an MQTT based display you can build as many as you want, all of them will show the same info even on different places on the world or the house (where Wi-Fi connectivity to internet is available)

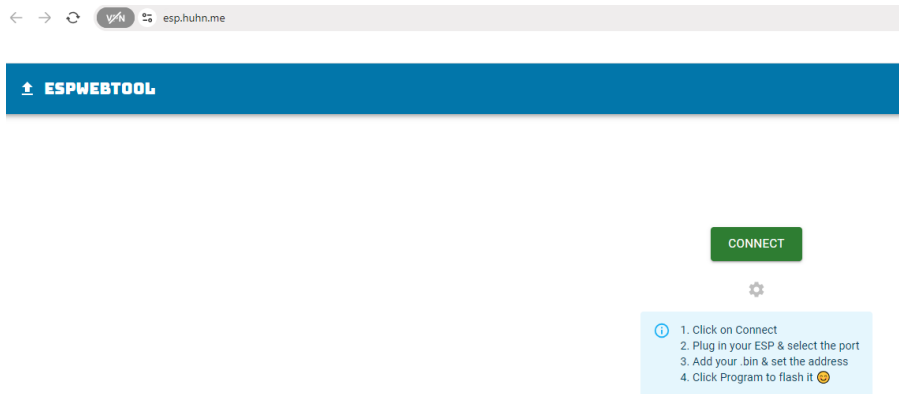
QUICK INTRO to [openHASP](#) is a free very cool project that make super easy creating graphical panels. Multiple display are supported, even bigger in inches. Get inspired by the “*scanlabs.json*” dashboard configuration exported by the [ScanLabs Dongle for BMS](#) to make yours.

Add your stuffs and customize your dashboard.

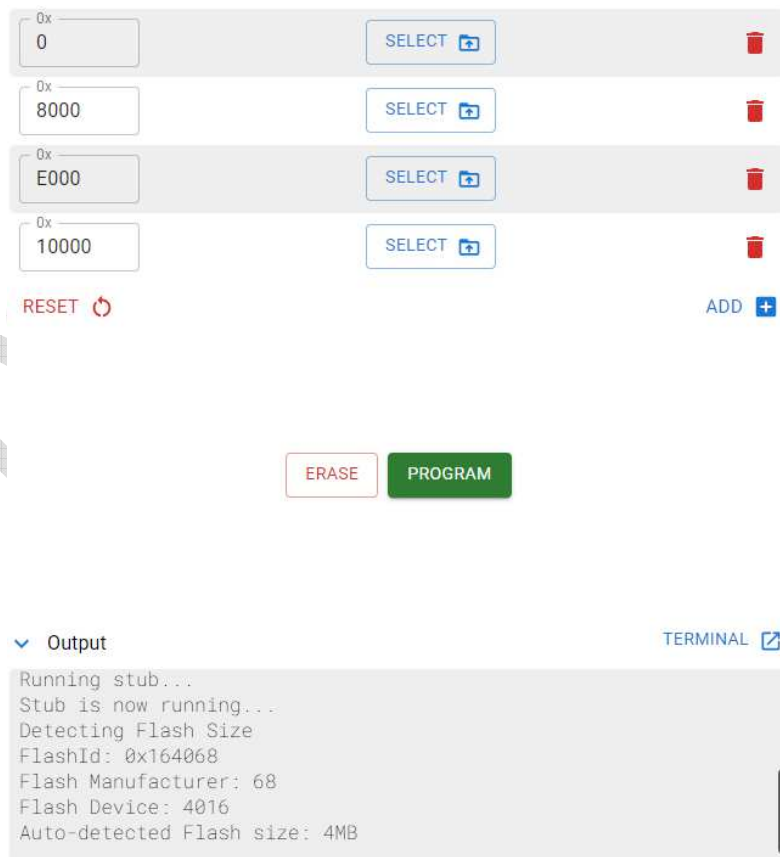
Let us MAKE IT!

## STEP-BY-STEP GUIDE

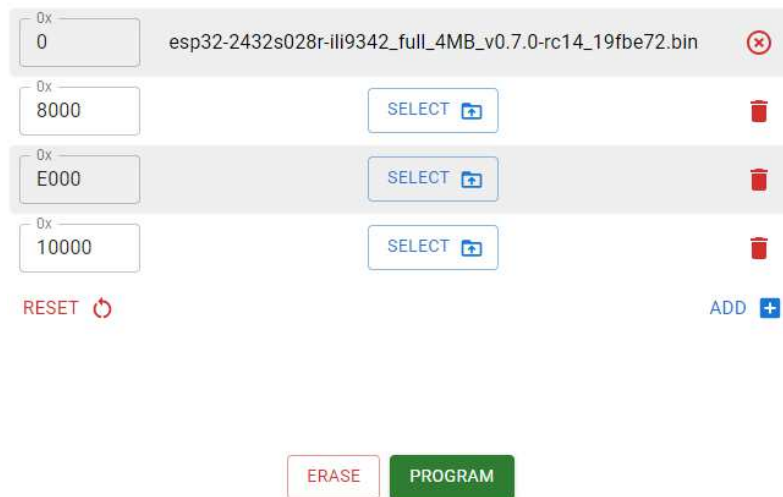
- 1- PROGRAM [ESP32-2432S028r](#) with openHASP 0.7.0 which binary I pre-build for you .  
[DOWNLOAD FROM HERE](#)
- 2- **Connect** the display through the ICD Port via an USB-Micro cable
- 3- Go to <https://esp.huhn.me/> is an online tool that implement ESP32 loader.  
Press "CONNECT"



- 4- A pop-up box appear, select the COM port on which the display is connected  
If everything is ok you should see a picture like this:



5- AT address 0x0000 Select the file [esp32-2432s028r-ili9342\\_full\\_4MB\\_v0.7.0-rc14\\_19fbe72.bin](#)



6- "ERASE"

7- "PROGRAM" .... Wait all the steps , it will take about 1 minute

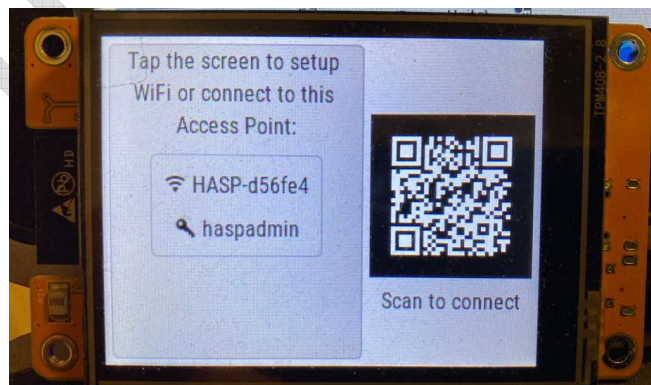


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8- Power cycle the display (unplug , wait 5s and re-plug the usb cable)

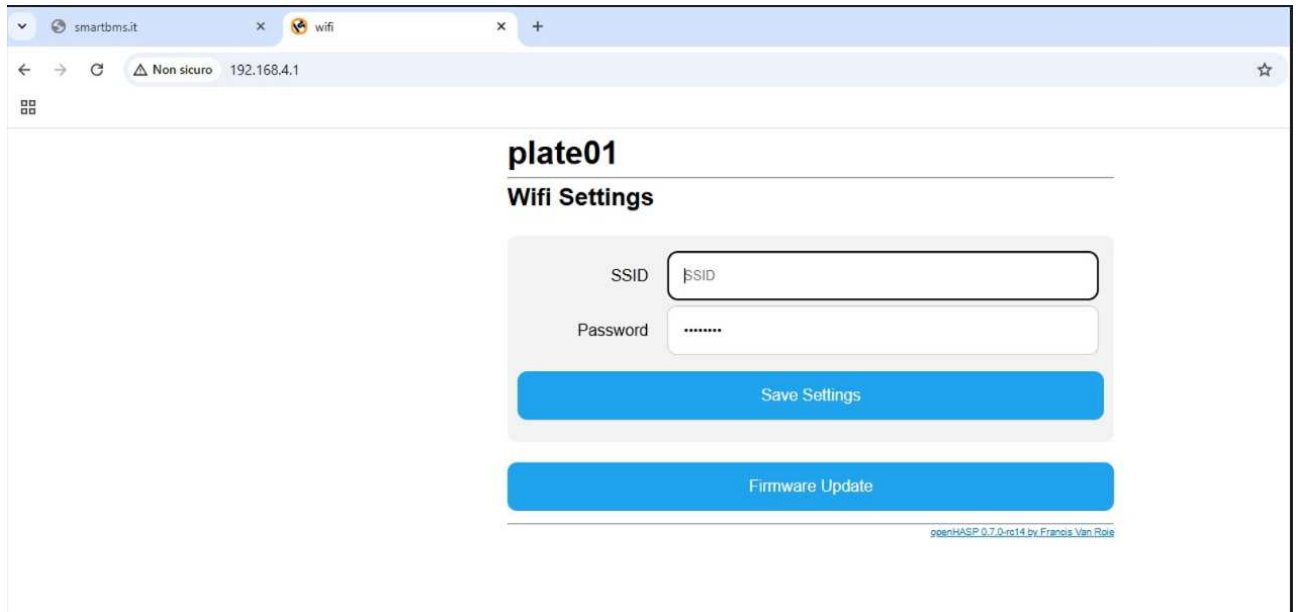
9- openHASP will Start showing a QR CODE to let you scan it and connect to the WiFi Network created

- SSID HASP-d56fe4 ( your will be slightly different )
- Password: haspadmin

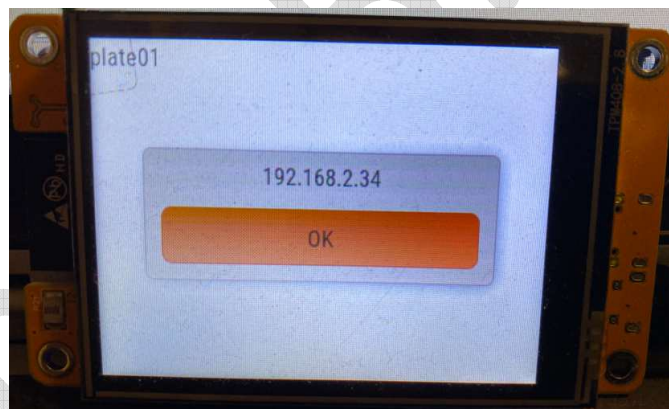


10- Once connected to the Wi-Fi, open an Internet Browser and go to page <http://192.168.4.1>

11- On the WebPage, **SET** your home Wi-Fi network **SSID** and **PWD** – “SAVE SETTINGS”



12- The Display RESTART – If you were not wrong entering Wi-Fi credentials, you will soon get a message on the display with the IP assigned. **TAKE NOTE OF IT!**



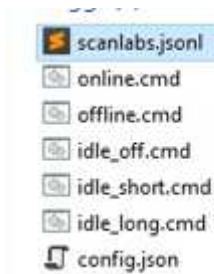
13- With your Internet Browser go to the IP address shown on the display. In this case 192.168.2.34



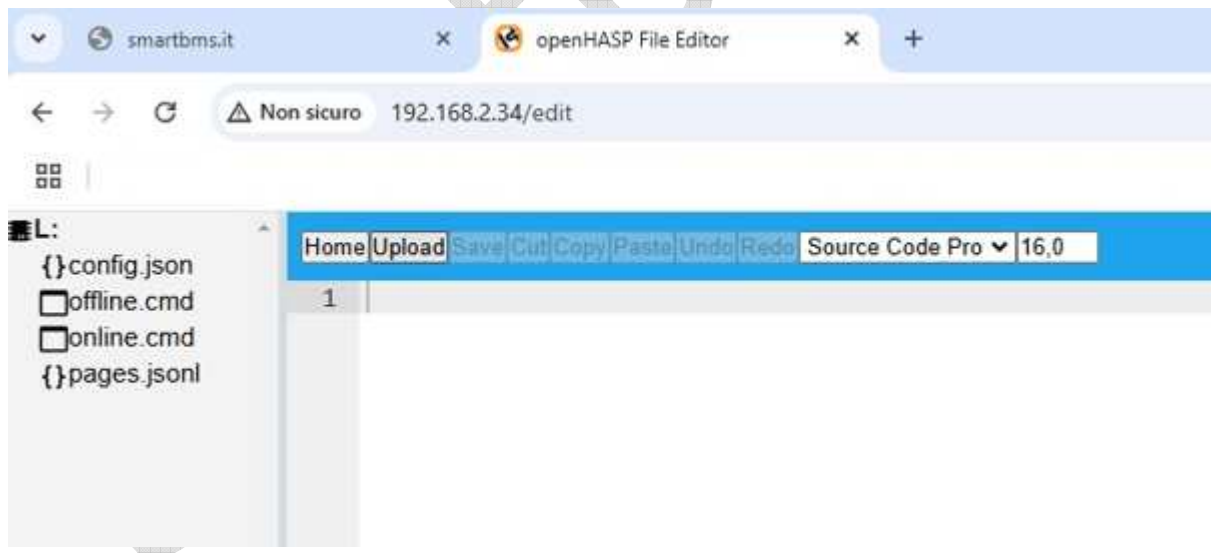
- 14- On the [ScanLabs Dongle for BMS](#) web Page “SETTINGS” -> “DISPLAY” enable “REMOTE DISPLAY” and select the Display PLATE id -> **SUBMIT** to enable the service  
NOTE: If you have more than one dongle, each of them need a dedicated PLATE ID.

' and 'DISPLAY PLATE: 

- 15- Press on “GENERATE openHASP CONFIG”. 7 files will be generated with you current setup:



- 16- GO to “FILE EDITOR” the second last one on the list of the openHASP display



- 17- Select “UPLOAD” and upload all the 7 files generated by the dongle. When all the 7 files are uploaded -> unplug USB, wait 5s and plug it again.

- 18- Et voila' !