CONFIGURE TASMOTA COLOR DISPLAY with ScanLabs Dongle

v1.0 02-25-2025

Following this basic manual, you will be able to build a colour-graphic display based on the TASMOTA project.

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

Total project cost is about 15$ (for the display & enclosure)
Time to make it: 10 minutes (if you follow this manual ;-))
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 TASMOTA is an open source project that allows creating graphical Dashboard.
Multiple display are supported, even bigger in inches. You can adapt this job to different panels. What you need is to get inspired by the "*pages.jsonl*" dashboard configuration and by the "autoexec.be" Berry script file for unpack MQTT and show the data.
Add your stuffs and customize your dashboard.

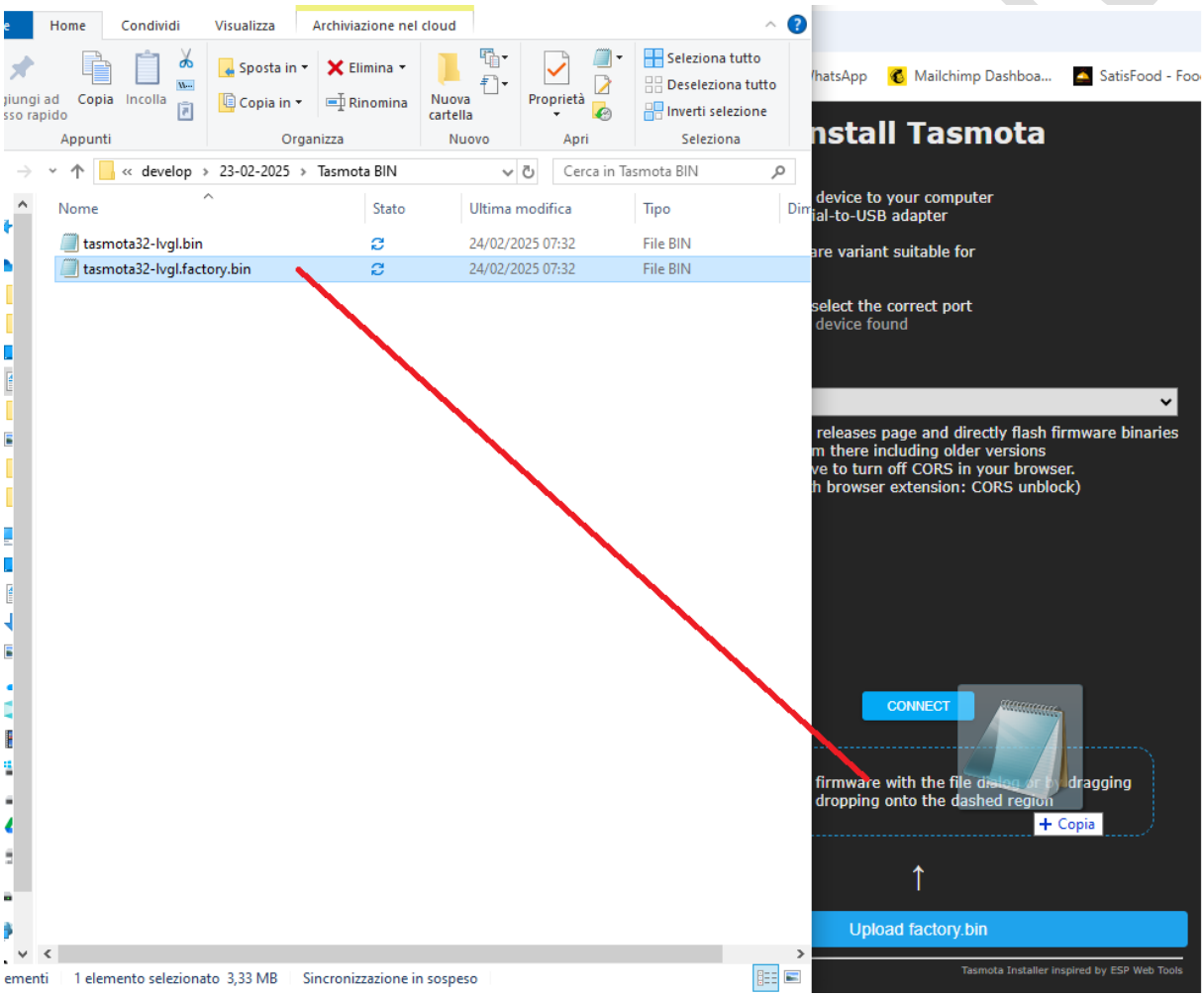
Let us MAKE IT!

STEP-BY-STEP GUIDE

1- Download the TASMOTA binaries from http://sidweb.nl/tasmota32/
go to the section "*Factory binaries to be used for inital flashing using esptool*" .
Download tasmota32-lvgl.factory.bin
We need LVGL graphic libraries for this project.
TESTED on Tasmota firmware **14.5.0.1** on ESP32

2- Open https://tasmota.github.io/install/

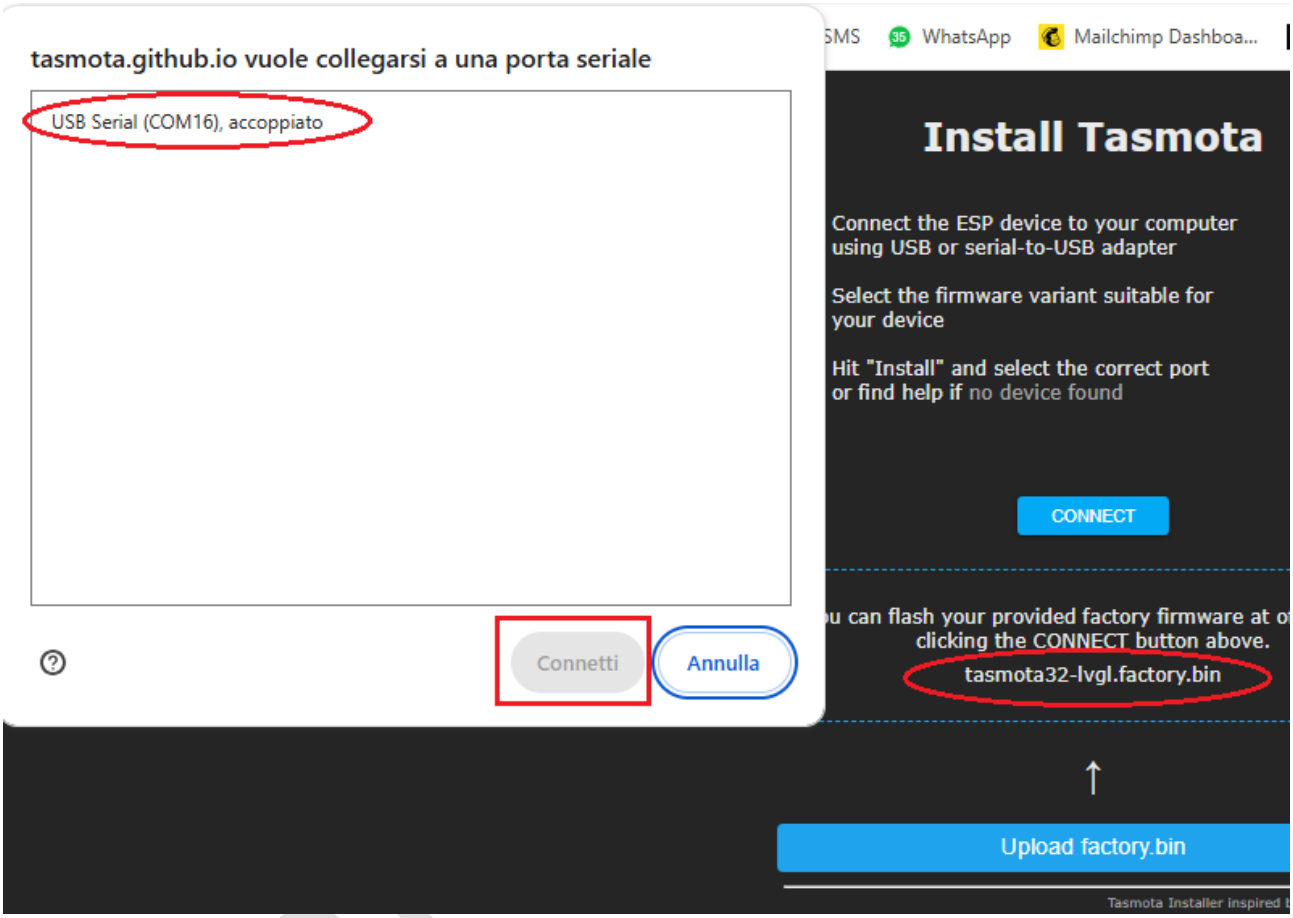
3- Drag & drop **tamosta32-lvgl.factory.bin** into the BOX like in the image



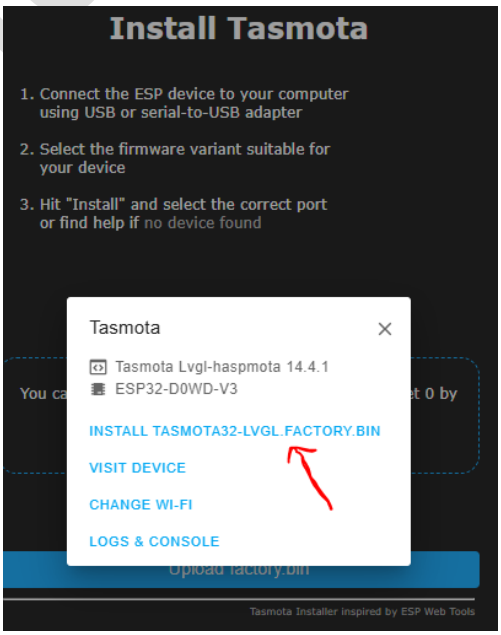
3- connect ESP32-2432S028r via USB type B or C to your computer

4- Press on “CONNECT” on the TASMOTA WebPage

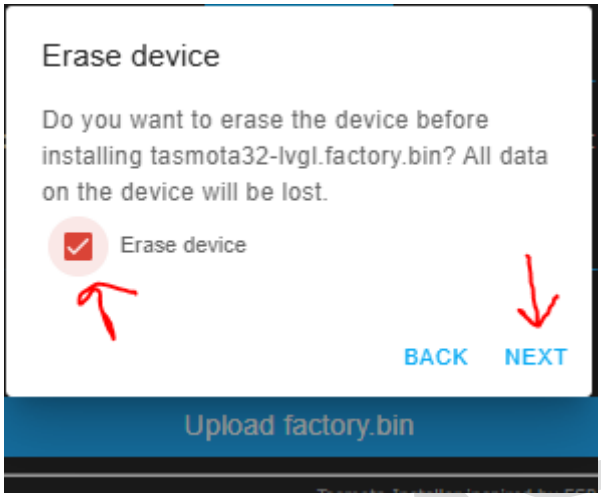
5- A popup open with the list of the COM Port detected.
   a. Select the one belonging to the display.
   b. Press on “Connect”



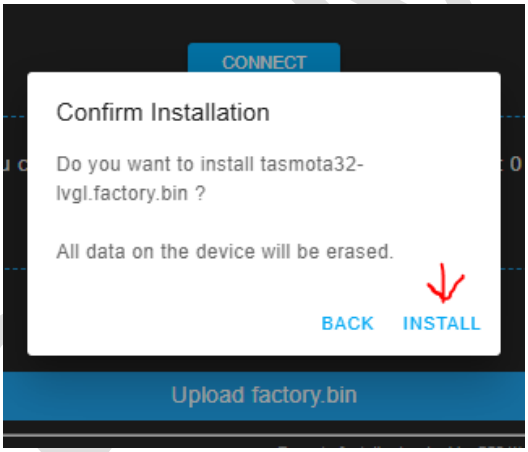
6- When the next popup appears select “INSTALL TASMOTA32-LVGL.FACTORY.BIN”



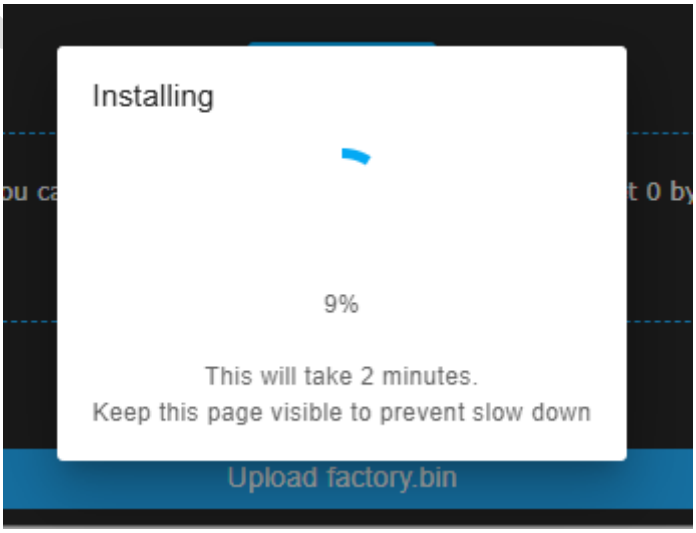
7- Select “ERASE ALL”
8- Select “NEXT”



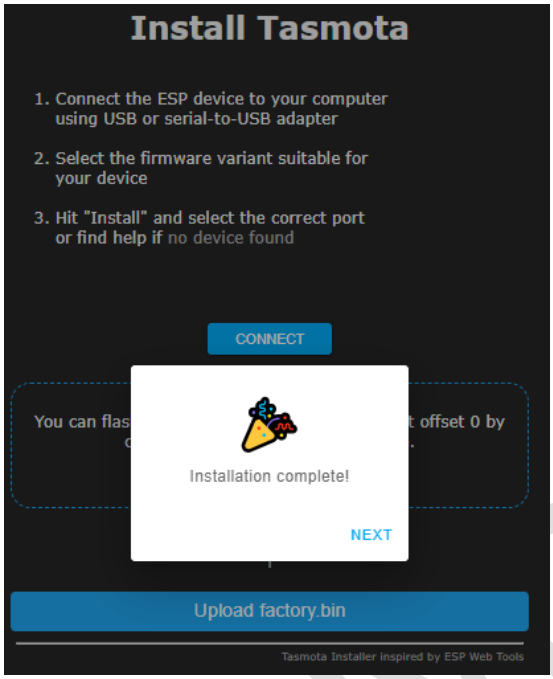
9- Click on “INSTALL”



10- Be patient, it takes about 2 minutes to upload the firmware on the display

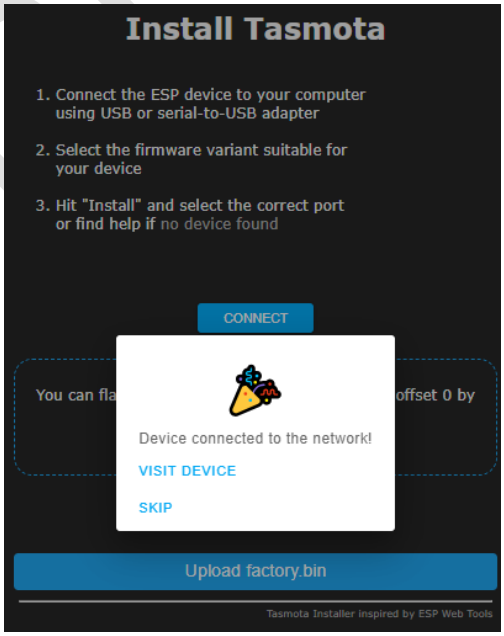


11- If all goes right you'll land here – Press "NEXT"

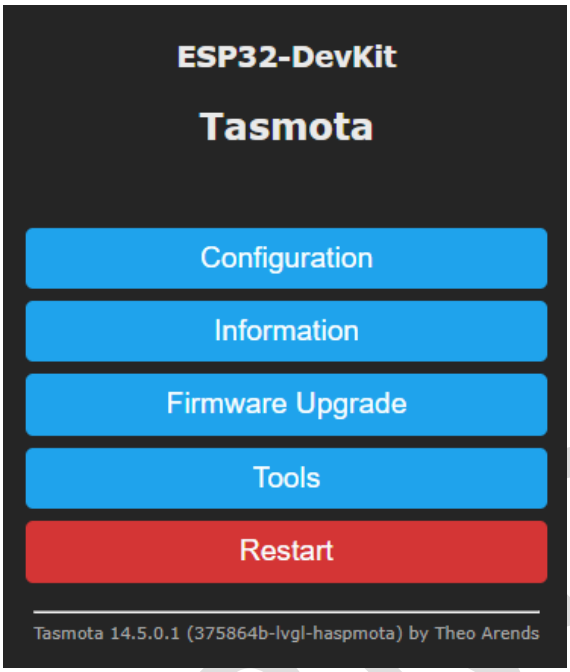


12- You will asked for your WiFi SSID and Password. Enter it

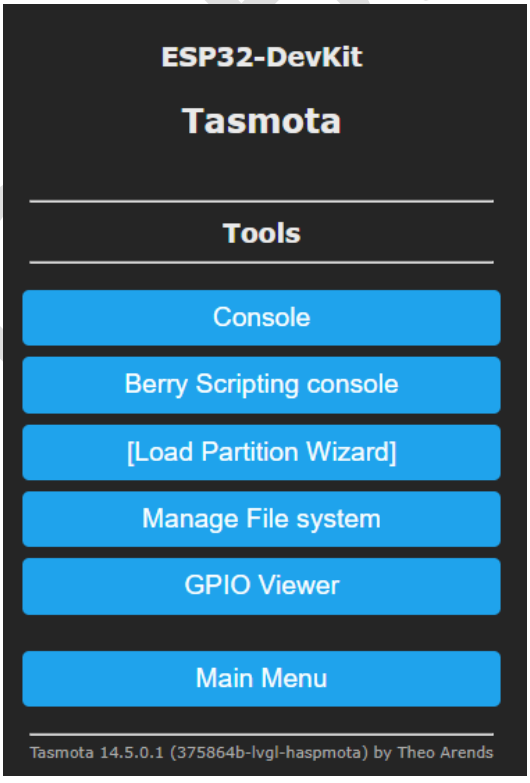
13- If you were not wrong adding your wifi credentials teh following message is show: "Device connected to the network !"
Click on "VISIT DEVICE"



14- The following web page open
Take note of the Display IP Address assigned by your router on the top of the web page
Click on "TOOLS"



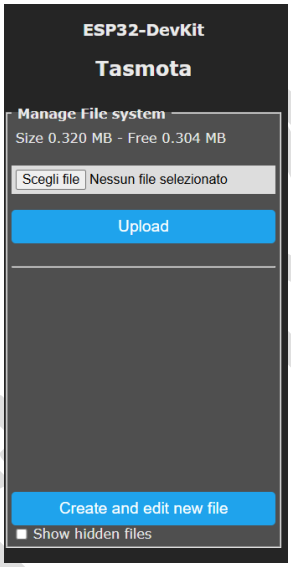
15- Click on "**Manage File system**"

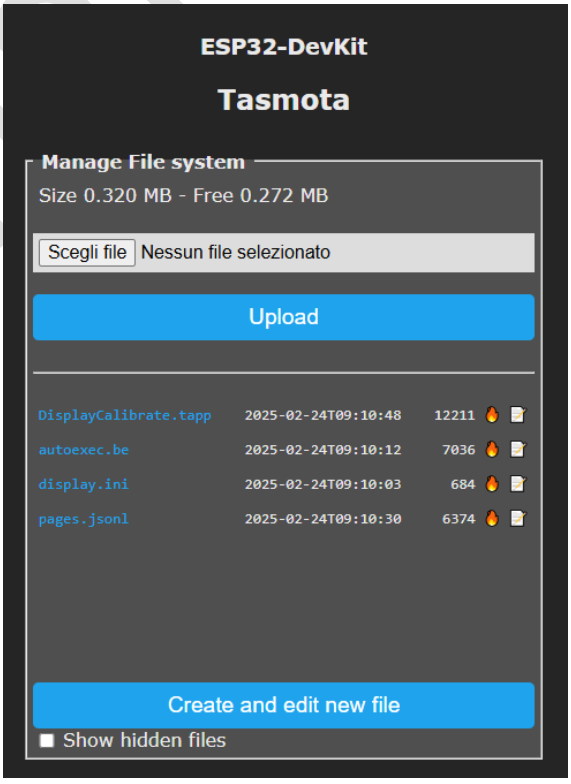


16- From HERE download the file “***ScanLabs Tasmota.zip***” unzip it .

Inside you find :	“autoexec.bat” “display.ini” “pages.jsonl” “DisplayCalibrate.tapp”

17- “Select File” each of the files and “Upload” all of them





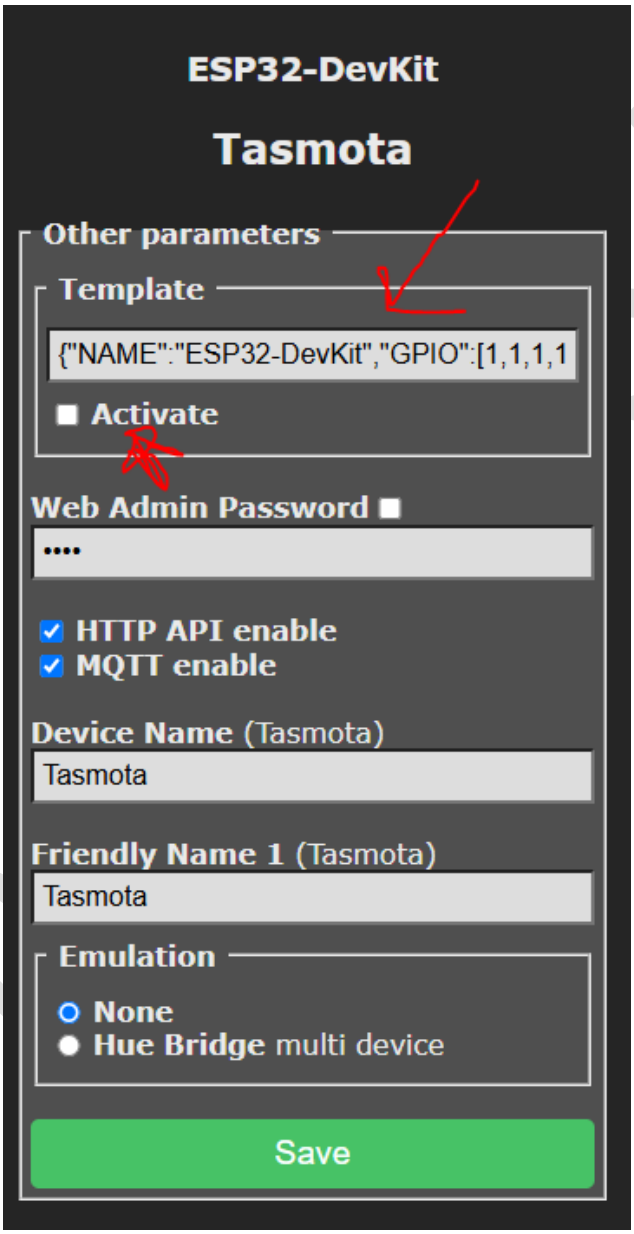
18- Go to : “Tools -> Main Menu -> Configuration -> Other”

a. COPY the following:
{"NAME":"ESP32-2432S028","GPIO":[6210,1,800,0,448,0,1,1,672,704,736,768,449,1,1,1,0,992,1,1,0,737,480,1,0,0,0,0,705,10944,4704,1,0,0,0,673],"FLAG":0,"BASE":1}

b. Place the string on the “**Template**” box

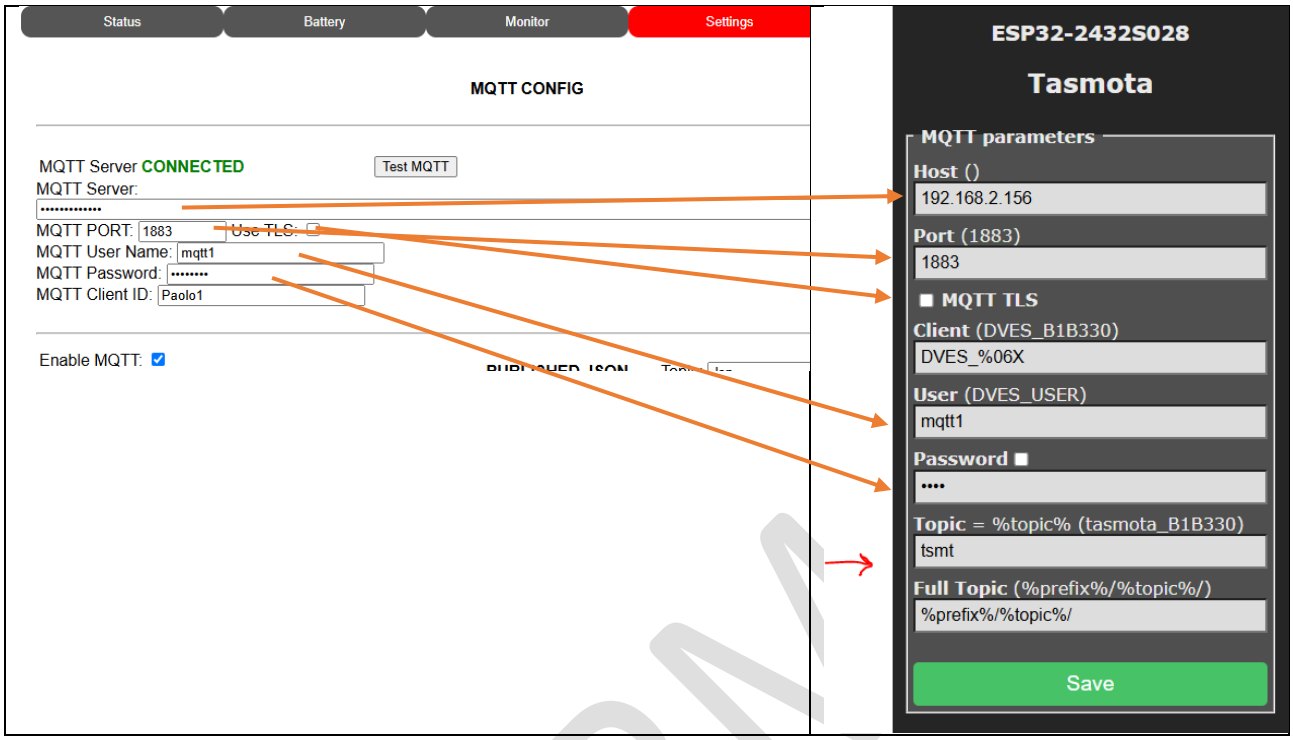
c. Click on “**Activate**”

d. Click on “**SAVE**” at the bottom



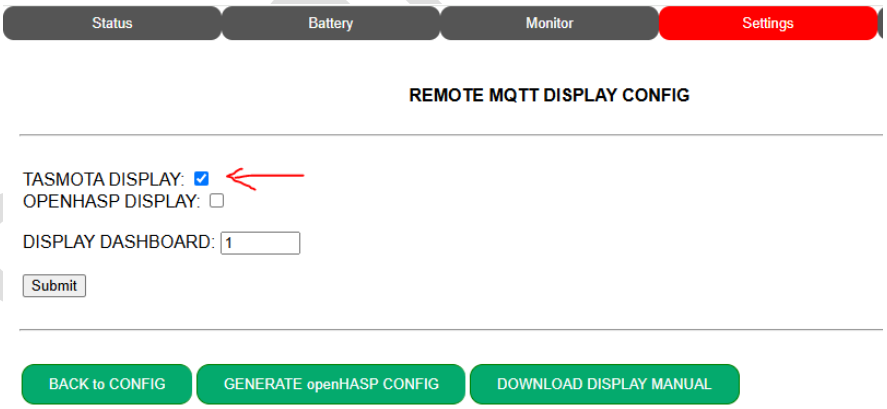
19- At this point, rebooting the display you should be able to see the DASHBOARD.
If not repeat points from pt 16.

20- From MAIN menu click on “**CONFIGURATION**” -> “**MQTT**”
Here you need to copy EXACLTY the data you have added into the ScanLabs dongle.



21- In the “Topic” field set “tsmt”

22- On the ScanLabs dongle : “SETTINGS” -> “DISPLAY” enable “TASMOTA DISPLAY” + “SUBMIT”
NOTE: Keep DISPLAY DASHBOARD = 1 (multiple pages will be supported soon)



23- Et voila’ !