CONFIGURE TASMOTA COLOR DISPLAY with ScanLabs Dongle

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Following this basic manual, you will be able to build a colour-graphic display based on the <u>TASMOTA</u> 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* <u>ScanLabs dongle/s</u> 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
 - o Free STL option 1
 - o Free STL option 2
 - o 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 <u>TASMOTA</u> 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

- Download the <u>TASMOTA</u> binaries from <u>http://sidweb.nl/tasmota32/</u> go to the section "*Factory binaries to be used for inital flashing using esptool*".
 Download <u>tasmota32-lvgl.factory.bin</u>
 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 <u>TASMOTA</u> 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"

tasmota.github.io vuole collegarsi a una porta seriale	SMS 🚳 WhatsApp 💰 Mailchimp Dashboa
USB Serial (COM16), accoppiato	Install Tasmota
	Connect the ESP device to your computer using USB or serial-to-USB adapter
	Select the firmware variant suitable for your device
	Hit "Install" and select the correct port or find help if no device found
	CONNECT
⑦ Connetti Annulla	ou can flash your provided factory firmware at or clicking the CONNECT button above. tasmota32-lvgl.factory.bin
	1
	Upload factory.bin
	Tasmota Installer inspired t

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

. .

	Install Tasmota	1
1. Conn using	ect the ESP device to your computer J USB or serial-to-USB adapter	
2. Selec your	t the firmware variant suitable for device	
3. Hit "I or fin	Install" and select the correct port id help if no device found	
	Tasmota	×
You ca	 Tasmota Lvgl-haspmota 14.4.1 ESP32-D0WD-V3 	t 0 by
	INSTALL TASMOTA32-LVGL.FACTORY.E	IN
·	VISIT DEVICE CHANGE WI-FI	
	LOGS & CONSOLE	
	Tasmota Installer insp	ired by ESP Web Tools

- 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

Installing	
DU Ca	t O b
9%	
This will take 2 minutes. Keep this page visible to prevent slow down	
Upload factory.bin	

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"

Install Tasmota
 Connect the ESP device to your computer using USB or serial-to-USB adapter Select the firmware variant suitable for your device Hit "Install" and select the correct port or find help if no device found
You can fla price connected to the network! Device connected to the network! VISIT DEVICE SKIP
Upload factory.bin

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 <u>HERE</u> 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":"ESP322432S028","GPIO":[6210,1,800,0,448,0,1,1,672,704,736,768,449,1,1,1,0,992,1,1,0,737,48
 0,1,0,0,0,705,10944,4704,1,0,0,0,673],"FLAG":0,"BASE":1}
 - b. Place the string on the "Template" box
 - c. Click on "Activate"
 - d. Click on "SAVE" at the bottom

	ESP32-DevKit	• ×
	Tasmota	
	Template	
	■ Activate	
	Web Admin Password ■ 	
	 ✓ HTTP API enable ✓ MQTT enable 	
	Device Name (Tasmota) Tasmota	
	Friendly Name 1 (Tasmota) Tasmota	
2	Emulation O None Hue Bridge multi device	
	Save	

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 <u>ScanLabs</u> dongle.

Status	Battery	Monitor	Settings	ESP32-2432S028
		MQTT CONFIG		Tasmota
MQTT Server CONNECTED MQTT Server: MQTT PORT: [1883 USe TLG: MQTT User Name: [mqtt1 MQTT Password: [MQTT Client ID: Paolo1 Enable MQTT: ■		DIDIOUEN ICON	Texter	MQTT parameters Host () 192.168.2.156 Port (1883) 1883 MQTT TLS Client (DVES_B1B330) DVES_%06X User (DVES_USER) mqtt1 Password = ···· Topic = %topic% (tasmota_B1B330) tsmt Full Topic (%prefix%/%topic%/) %prefix%/%topic%/

- 21- In the "Topic" field set "tsmt"
- 22- On the <u>ScanLabs</u> dongle : "SETTINGS" -> "DISPLAY" enable "TASMOTA DISPLAY" + "SUBMIT" NOTE: Keep DISPLAY DASHBOARD = 1 (multiple pages will be supported soon)

	REMO	OTE MOTT DISPLAY CON	IFIG
Asmota Display: 🗹 < Penhasp Display: 🗆	<u> </u>		
SPLAY DASHBOARD: 1			
Jubmit			
Jubmit			

23- Et voila' !