

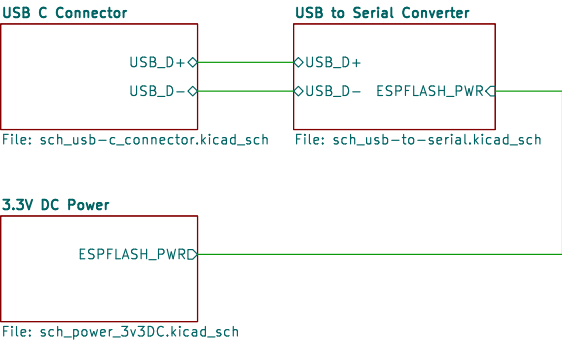
YAOEF (Yet Another Open ESP Flasher)

Issued 2025-03-20

Status: PROTOTYPE

Rev 1.1

PROJECT ARCHITECTURE



PROJECT DESCRIPTION

A design for a simple "dongle" for flashing ESP32 based devices that have the ESPFlash header implemented (per Jon Oxer, SuperHouse. Ref <http://superhouse.tv/espflash>).

Why build USB capabilities into every ESP32 design when a simple header will suffice? Saves on parts count, additional footprint, etc. The dongle supports auto-programming logic. A power switch allows the dongle to be used for serial debugging when under circuit power (i.e., turn the switch off to disable USB power to ESPFlash header).

PROJECT NOTES

N/a

DESIGN NOTES KEY

DESIGN NOTE:
Example text for
informational design notes.

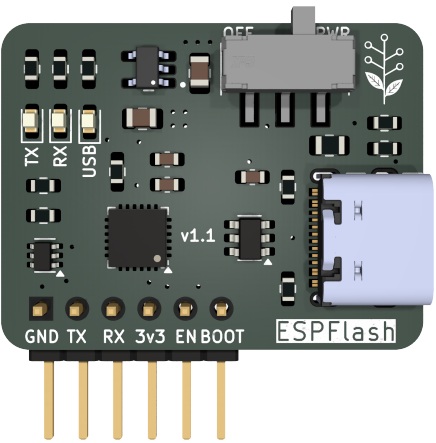
DESIGN NOTE:
Example text for cautionary
design notes.


DESIGN NOTE:
Example text for critical
design notes.

LAYOUT NOTE:
Example text for critical
layout guidelines.

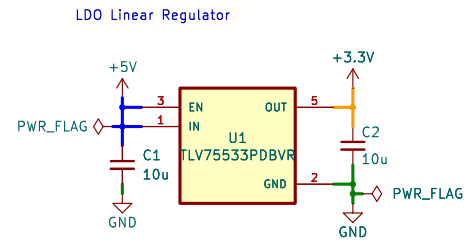
DRAFT – Very early stage of schematic, ignore details.
PRELIM – Close to final schematic.
PROTOTYPE – Untested in its built form.
TESTED – A board with this schematic has been built and tested.

TOP VIEW



Title: YAOEF (Yet Another Open ESP Flasher)			 Wattle Labs
Sheet: / File: ESPFlash.kicad_sch			
Rev: 1.1	Date: 2025-03-20	Id: 1/5	KiCad E.D.A. 9.0.0

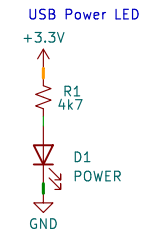
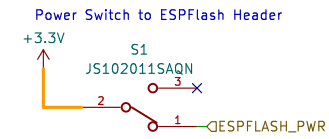
[3] 3.3v DC Power Supply



DESIGN NOTE:

V_{IN}: 1.45 to 5.5V

V_{OUT}: fixed 3.3V, max 500mA



Title: 3.3v DC Power Supply

Sheet: /3.3V DC Power/

File: sch_power_3v3DC.kicad_sch

Rev: 1.1

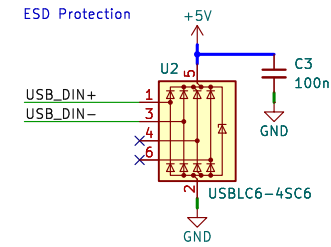
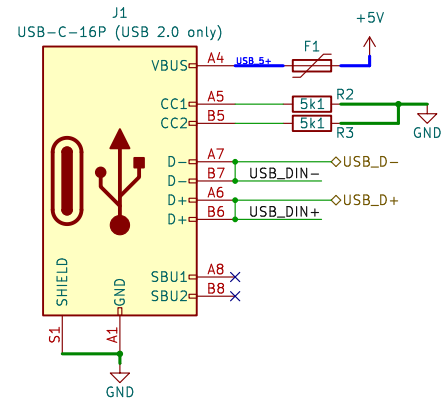
Date: 2025-03-20

Id: 3/5

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[4] USB C Connector & ESD Protection



Title: USB C Connector & ESD Protection

Sheet: /USB C Connector/

File: sch_usb-c_connector.kicad_sch

Rev: 1.1

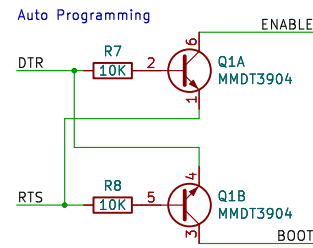
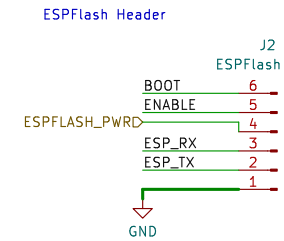
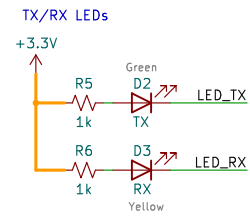
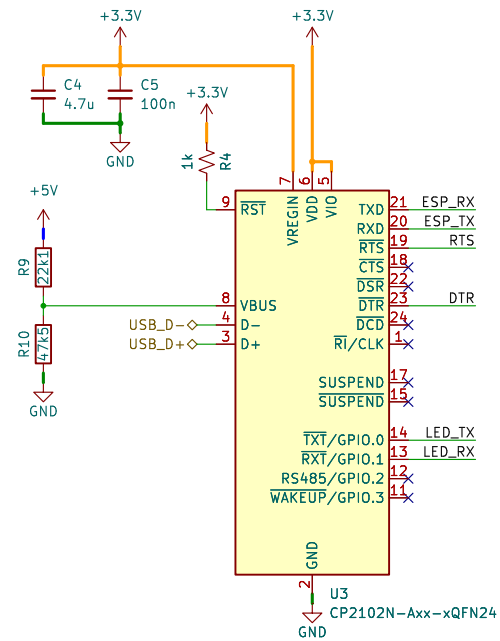
Date: 2025-03-20

Id: 4/5

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[5] USB to Serial Converter



Title: USB to Serial Converter
 Sheet: /USB to Serial Converter/
 File: sch_usb-to-serial.kicad_sch

Rev: 1.1


Date: 2025-03-20

Id: 5/5

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	1	2	3	4	5	6
	[99] Revision History					
A	14-Mar-2025 – Rev 1.0 Status: Prototype		20-Mar-2025 – Rev 1.1 Status: Prototype		xx-xxx-20xx – Rev 0.0 Status: ???	
	Initial version.		* Swapped LDO regulator for a SOT-23 device (previous was large SOT223). This opens up room on the board for a power switch. * Added surface mount power switch to allow 3.3V to be disabled on ESPFlash header. Allows in circuit serial monitoring/flashing when circuit is under normal power. * Added tear drops to vias and critical through-holes.			
B						B
C						C
D						D
	1	2	3	4	5	6

Title: Revision History			
Sheet: /Revision History/			
File: project history.kicad_sch			
Rev: 1.1	Date: 2025-03-20	Id: 99/5	KiCad E.D.A. 9.0.0