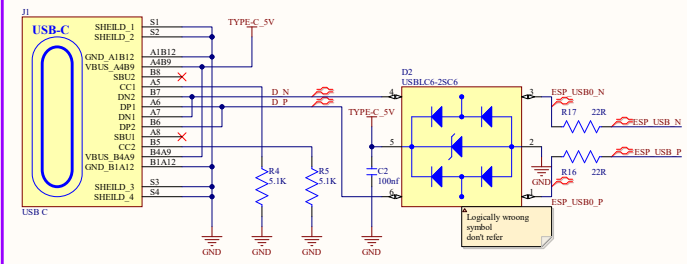
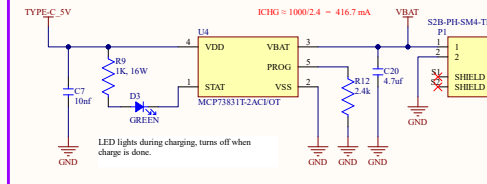


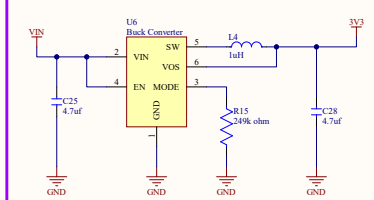
8 MB OSPI Flash



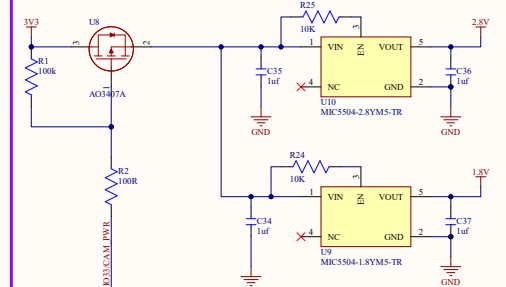
LiPo Battery Charger 1 cell



Voltage Regulator

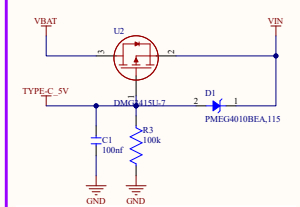


Camera Voltage Regulator



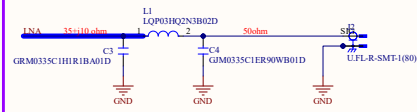
When ESP pin = 3.3 V the gate is pulled to source ($V_{GS} \approx 0$) → PFET OFF. When ESP pin = 0 V the gate is pulled low through R_{series} ($V_{GS} \approx -3.3$ V) → PFET ON. The 100 k Ω protects you if the MCU pin is floating at reset so the FET doesn't accidentally power the camera.

Power Switching (ORing)

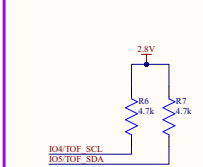


USB not connected: Gate = 0 V \rightarrow P-MOSFET ON \rightarrow VBAT \rightarrow VIN

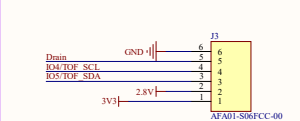
Antenna



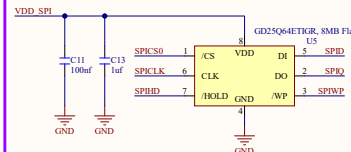
TOF range sensor



FLEX Connector

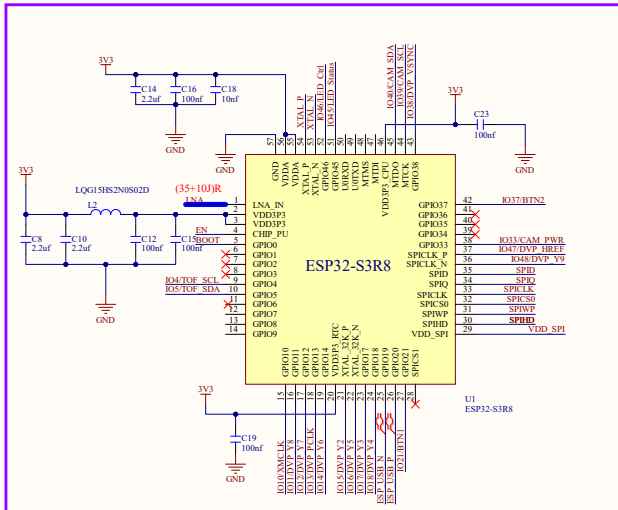
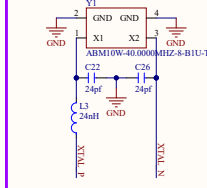


FLASH

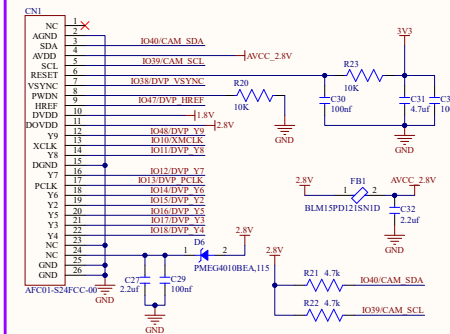


Place 0.1 μF + 1 μF decoupling caps close to VCC (Pin 8).
Keep SPI traces short, matched length, 50 Ω if possible (for >40 MHz).

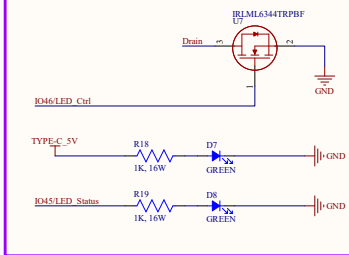
40 MHz crystal



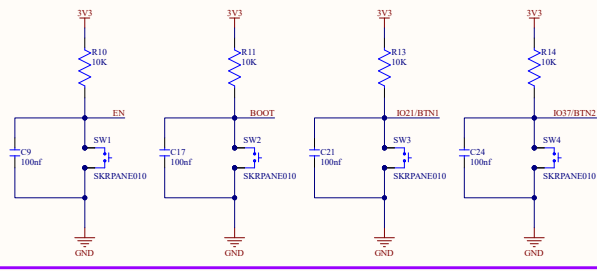
CAM Connector



LEDs



SWITCHES



Title		
Size A2	Number	Revision
Date: 9.25.2025	Sheet of	
File: E:\Avish's Projects\1\Draw Sheet ESP S	Drawn By:	