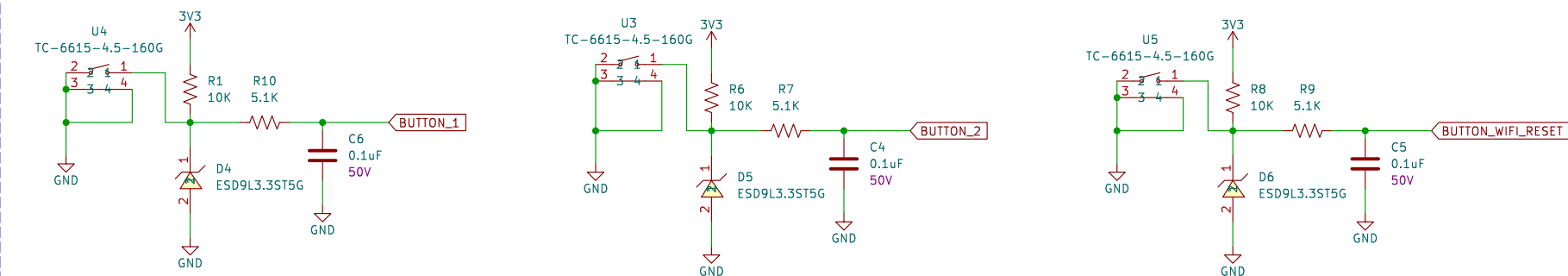
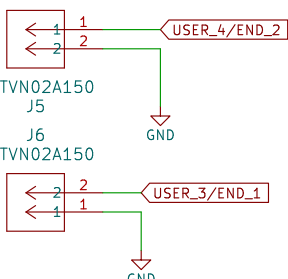


Buttons

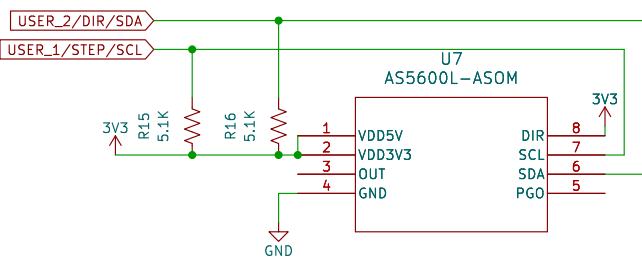


End stops



Two GPIOs are exposed, primarily as end stops. However, they can be used for anything. It's recommended to use the ESP32's internal pullup resistors with the end stops.

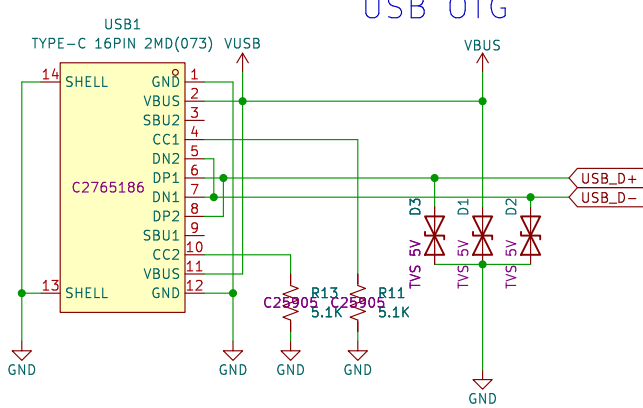
Encoder



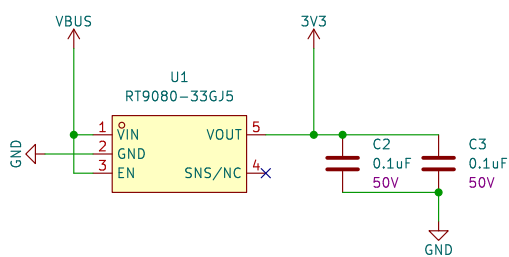
Only the footprint has been added to the VAL3000, but the encoder has not. It can be easily soldered if required.

ESP32 Uploader

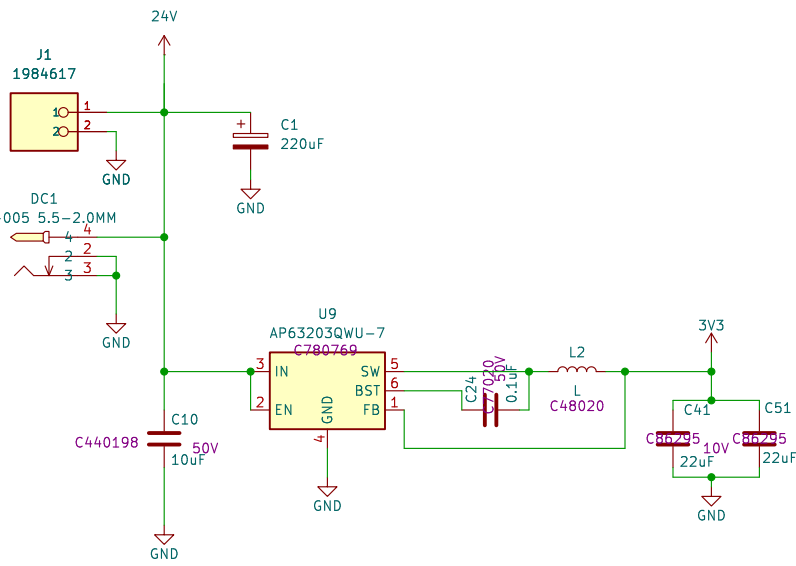
USB OTG



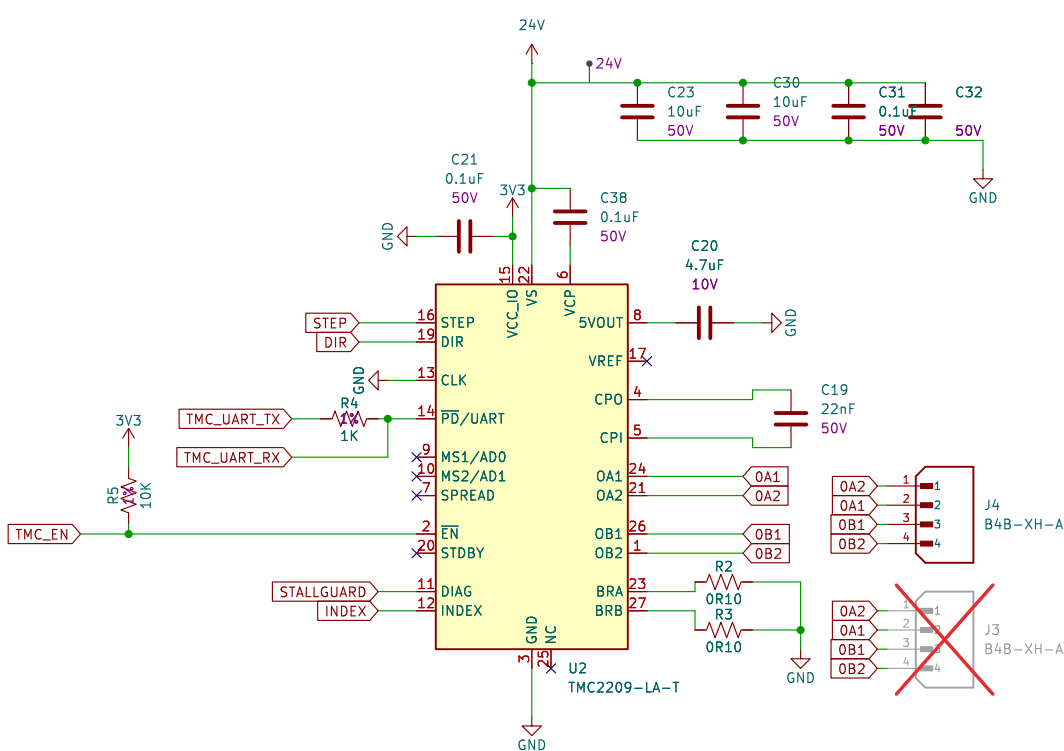
USB Voltage Regulator



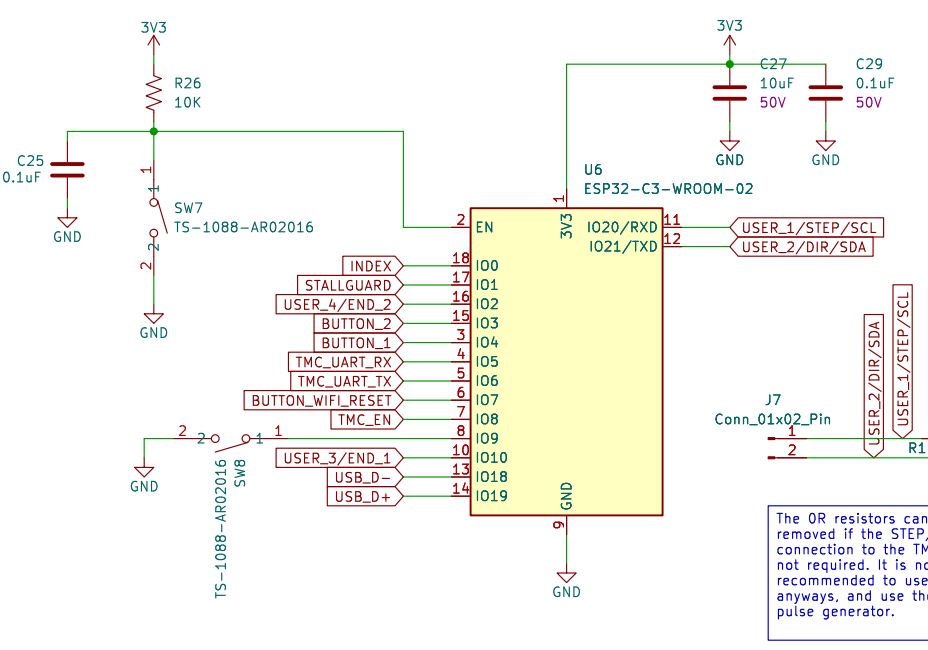
Motor Voltage Regulator



TMC2209



ESP32-C3



The OR resistors can be removed if the STEP/DIR connection to the TMC2209 is not required. It is not recommended to use it anyways, and use the built-in pulse generator.