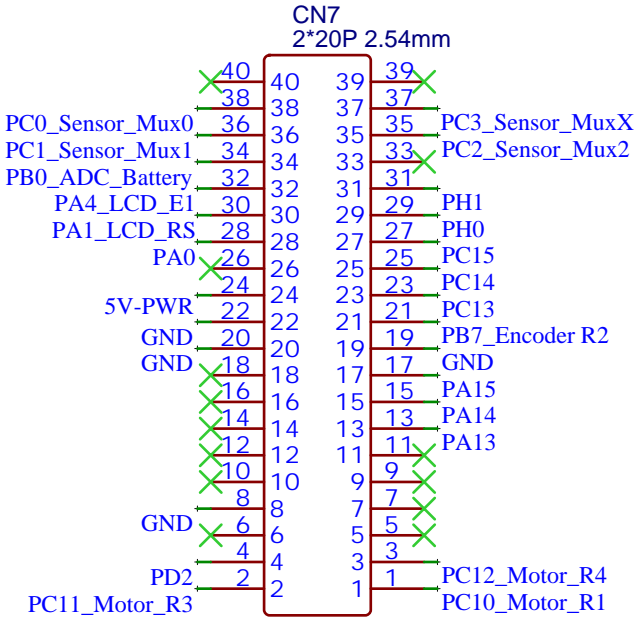
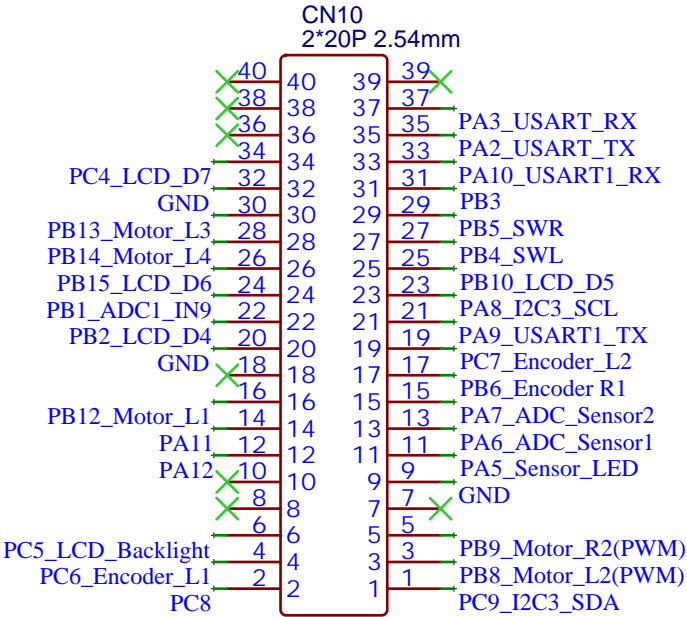
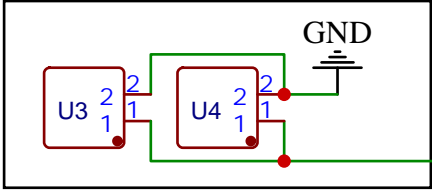


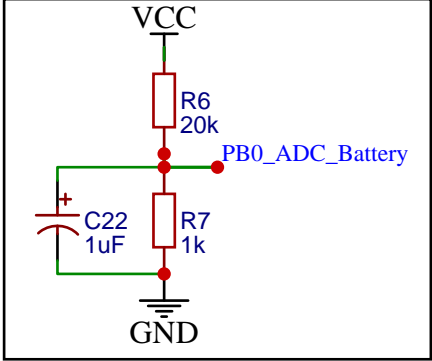
Note that the nucleo board only has 38 pins, so pins 40 and 39 are not used.



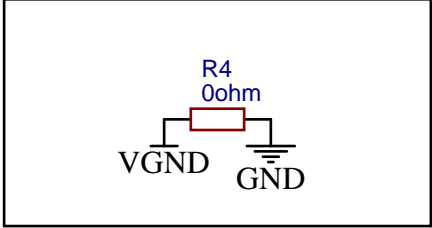
Power Molex



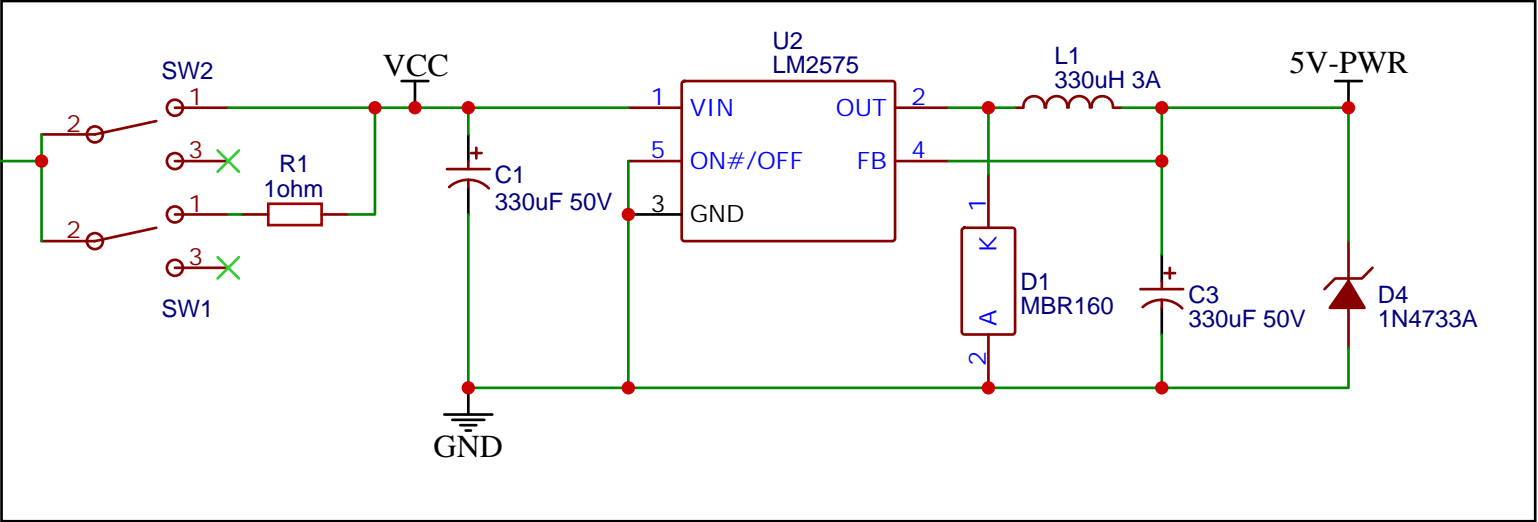
Voltage Sensing



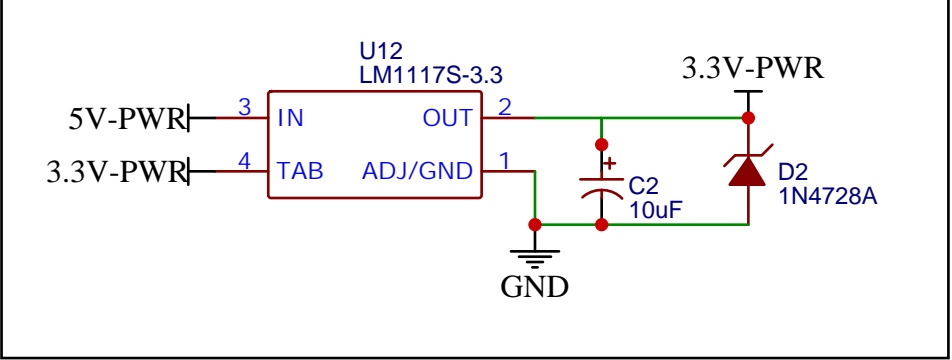
Ground Match



5V Regulator

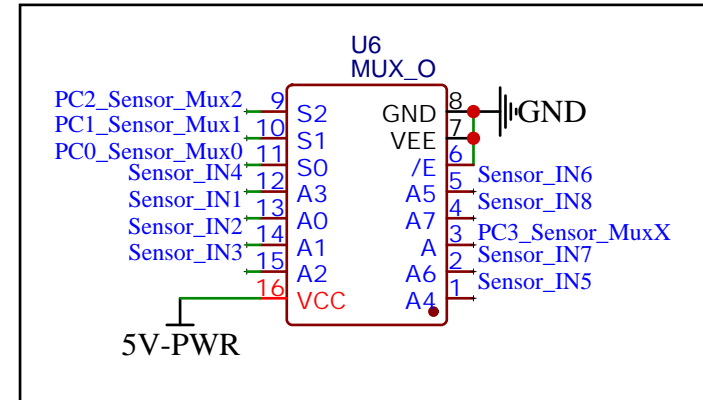


3.3V Regulator

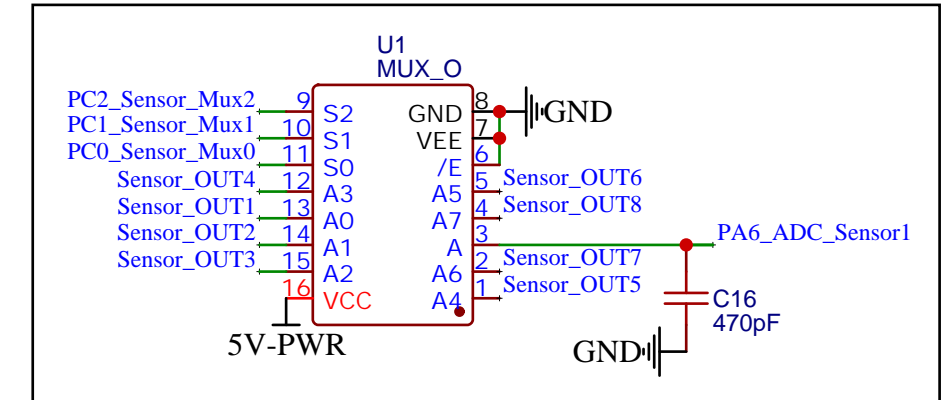


Maximum Battery Voltage = 50V

### Input (IR LED) Mux

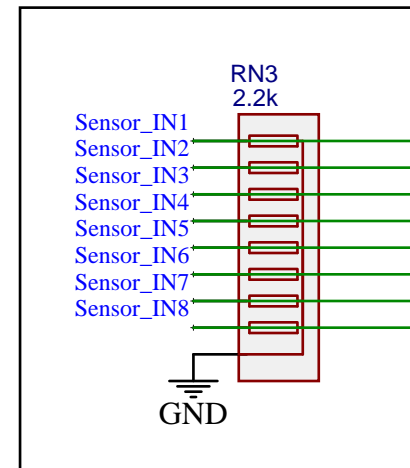


### Output (Phototransistor) Mux

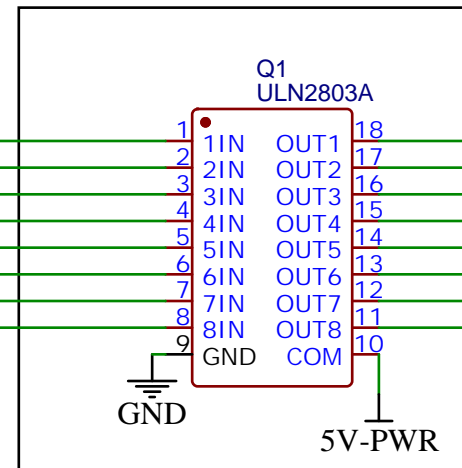


Signal Flow: IR LED --> Sensor

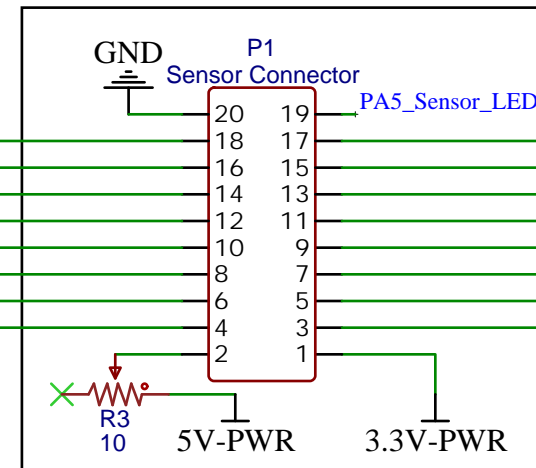
### IR LED Pull-Down



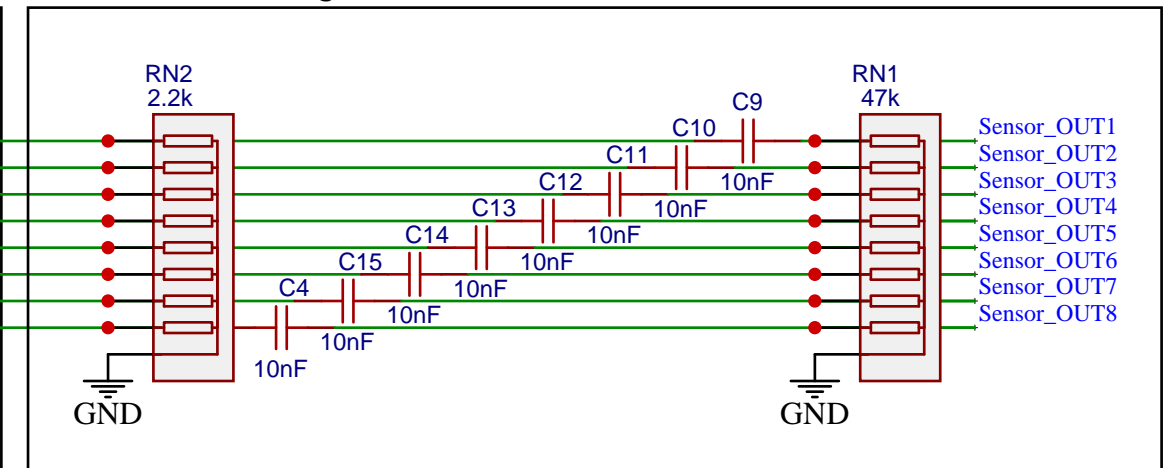
### IR LED ULN



### Connector



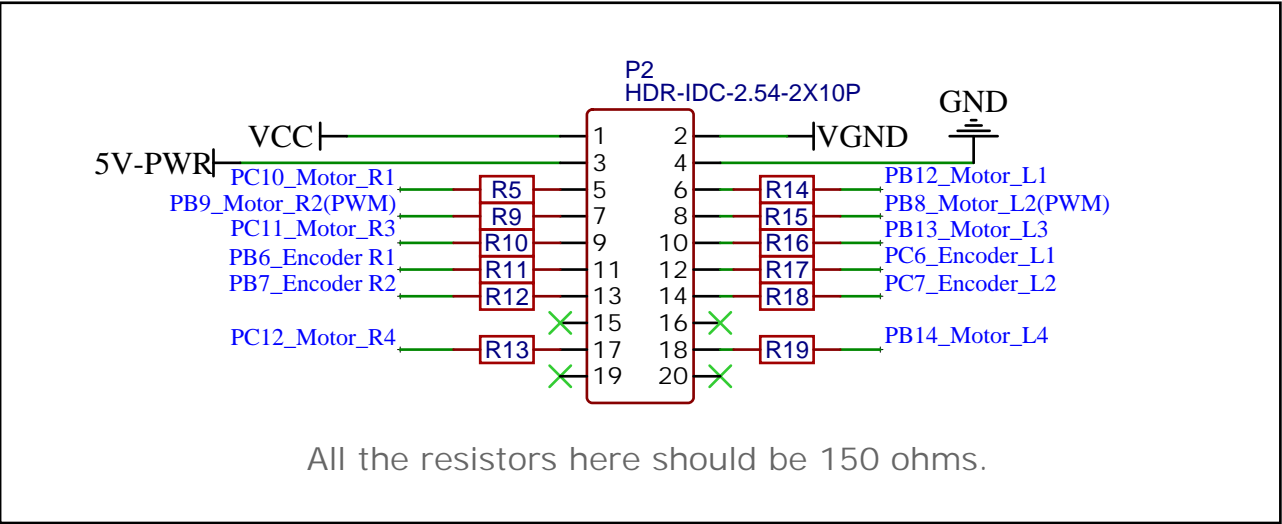
### Phototransistor High Pass Filter



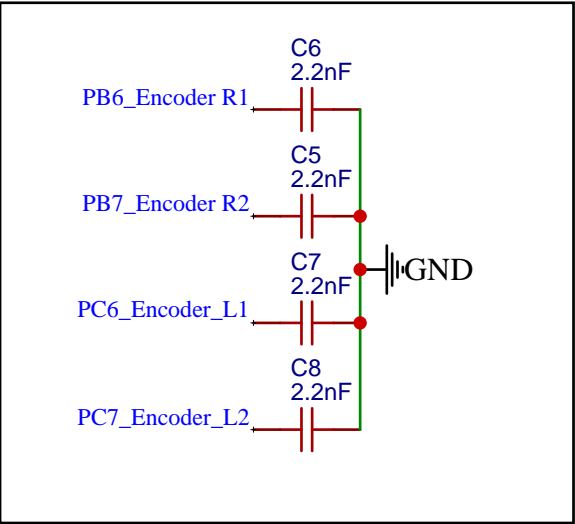
ULN 2803 consists of eight NPN Darlington transistors. It works as a NOT gate.

TITLE: Sensor		REV: 1.0
EasyEDA	Company: ZETIN	Sheet: 1/1
	Date: 2021-04-02	Drawn By: Joonho Gwon

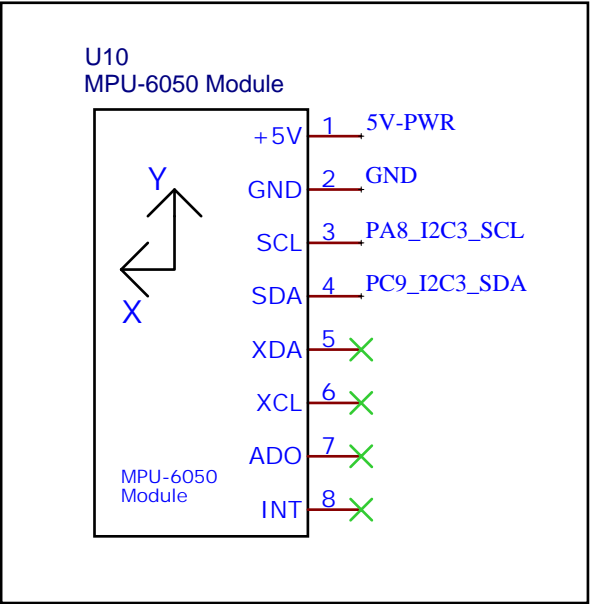
Motor Driver Connector



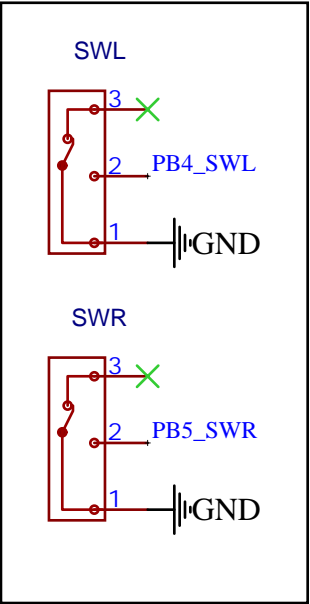
Encoder Noise Filter (LPF)



IMU



Switch



Character LCD

