Lab 3-5: Hardware

- Lab 3: TOF sensors (https://cei-lab.github.io/FastRobots-2023/Lab3.html)
- Lab 4: IMU sensors and battery
- Lab 5: Motor drivers

- Things to consider…
  - Where/how do you place components?
  - Routing paths (w. EMI considerations)
  - Color coding
  - Permanent solder joints / Detachable connections?
  - Single core or braided wires?
  - Which side of the breakout boards do you solder to?
  - What cable will you use where? Which will you cut for the ToF sensors?
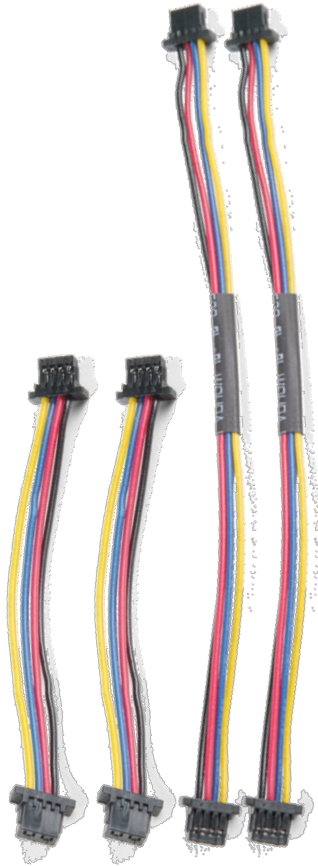 - Identify the colors of the signals in the QWIIC cable (GND, VCC, SDA, SCL)
  - **<FOCUS on getting all soldering done during your lab section this week!>**
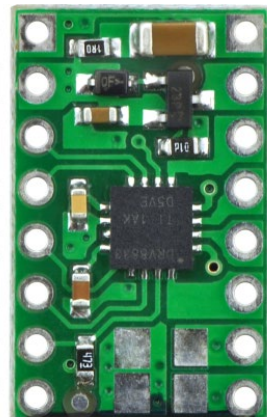
Lab 3-5: Hardware
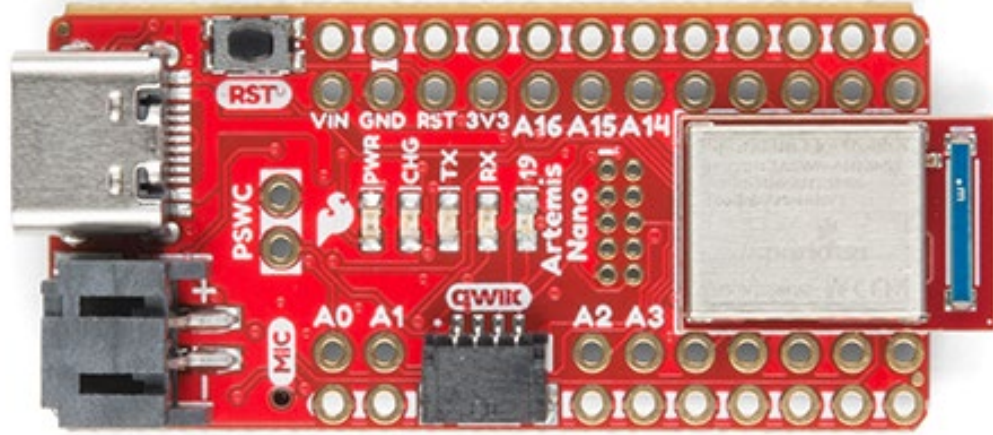
ICM20948 (Sparkfun)

Artemis Nano (Sparkfun)

VDD (2.8V out)
VIN (2.6–5.5V)
GND
SDA
SCL
XSHUT
GPIO1
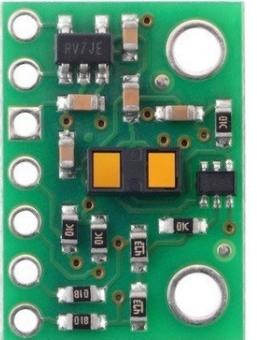
VDD (2.8V out)
VIN (2.6–5.5V)
GND
SDA
SCL
XSHUT
GPIO1

VLX53L1X (Pololu)

GND	GND
VMM	VIN
BIN1	BOUT1
BIN2	BOUT2
AIN2	AOUT2
AIN1	AOUT1
nSLEEP	AISEN
nFAULT	BISEN

GND	GND
VMM	VIN
BIN1	BOUT1
BIN2	BOUT2
AIN2	AOUT2
AIN1	AOUT1
nSLEEP	AISEN
nFAULT	BISEN
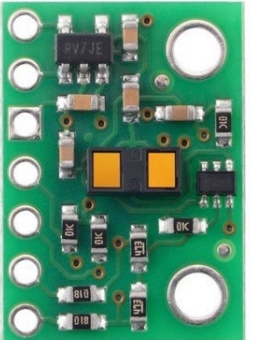
DRV8833 (Pololu)

Lab 3-5: Hardware

- Think about the placement of components and batteries