

Week 13

Keel Bone Chicken Project

11/21/2025

This Week

This week's progress

- PCBA Setup for Ordering
- BOM + PoS File Generation
- Final Routing
- Ordering PCB

PCBA Setup for Ordering

Using JLCPCB as a vendor

- Options:
 - JLCPCB
 - PCBWay
 - PCB Trace
- All have ~24 hour lead time + 3 day PCBA time
- Ship time varies
- PCBA on JLCPCB Parts: <https://jlpcb.com/parts/in-stock-parts>
 - Some parts may be unavailable, need to find alternatives

BOM Generation

~20 Components on BOM, listed below

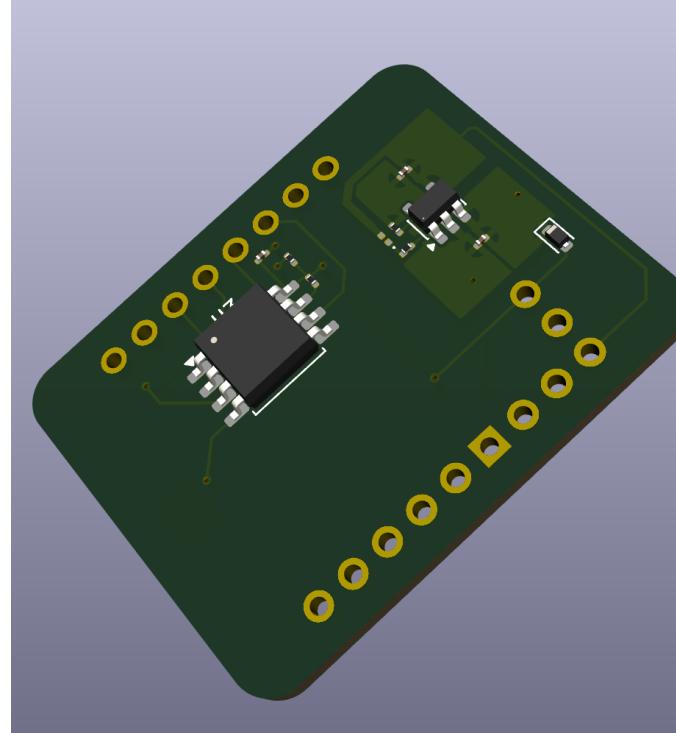
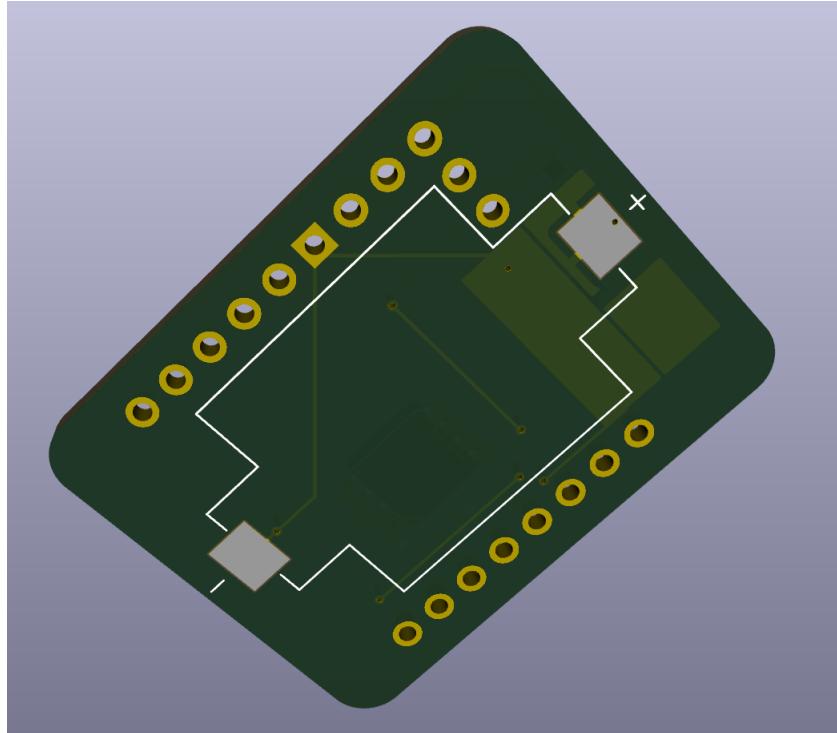
- BOM Created with JLC Extension in KiCAD:

	A	B	C	D	E	F
1	Designator	Footprint	Quantity	Value	LCSC Part #	
2	BT1	BAT_504		1 LIR2032	C17422337	
3	C1, C2		201	2 4.7 µF	C253012	
4	C4		201	1 1 uF	C53067	
5	D1		201	1 RED	C531176	
6	D2	D_SOD-523		1 1N4148WT	C2099	
7	R1		201	1 2.2 kΩ	C100164	
8	R2		201	1 470 Ω	C163491	
9	R3, R4		201	2 10 kΩ	C100126	
10	U1	SOT-23-5		1 MCP73831-2-OT	C14879	
11	U3	SOIC-8_5.3x5.3mm_P1.27mm		1 W25Q128JVS	C97521	
12						
13						

Final Routing

Several Different Design Choices

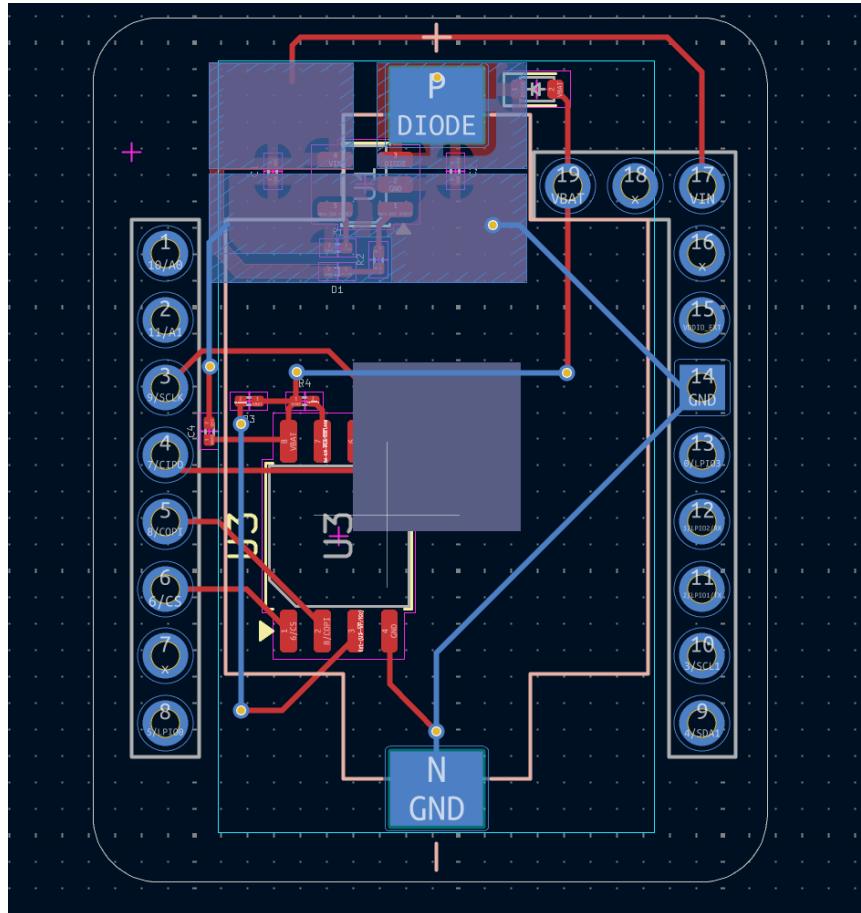
- Finished Rev. 1 Design
 - Slightly larger frame for PCB than (insufficient area to increase price)
 - 8 vias (1 may be cause of concern)



Final Routing

Traces on PCB Board

- Location of vias and rest of board shown below
 - Would prefer review of 1+ other individuals



Ordering PCB

From JLCPCB's website with .bom and .gerber and .pos files

- Quote around \$23 without assembly, \$59 with assembly

Charge Details

PCB Price \$13.00

Via Covering: \$0.00

Special Offer: \$13.00

Standard PCBA Price \$46.03

Setup Fee: \$25.00

Stencil: \$7.86

Panel: \$0.00

Large Size: \$0.00

Components(5 items): \$4.76

Feeders Loading fee: \$7.50

SMT Assembly \$0.44

Packaging fee: \$0.47

Build Time: ②

PCB: 3 days \$0.00

Total Price: \$59.03

Weight ② 667.91g

Product Description ②

Select

SAVE TO CART

Next Week

Blockers & Next Week's Work

- Hear back on Resistive vs. Capacitive Sensors
- Order PCBs before break
 - Fill out form 12 from ordering office
- Work on app store application
 - Developer app for monitoring Niclas + Sensors

Thank You

Purdue Polytechnic Institute