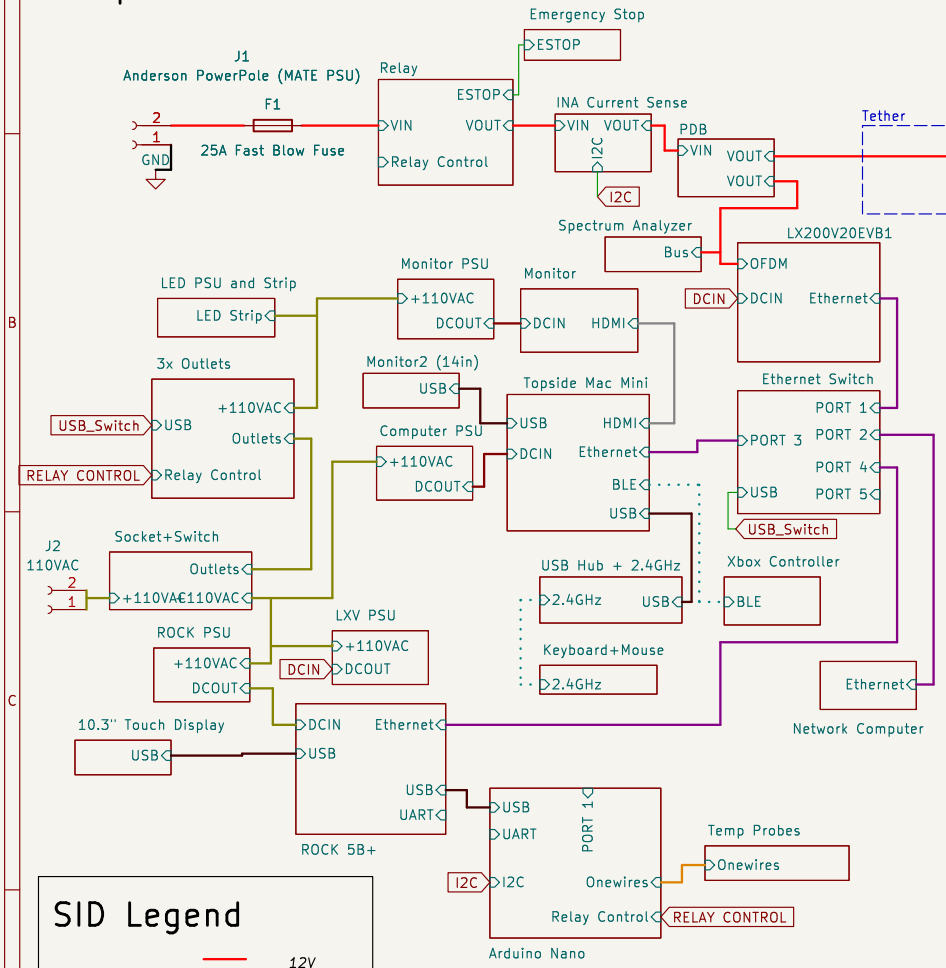
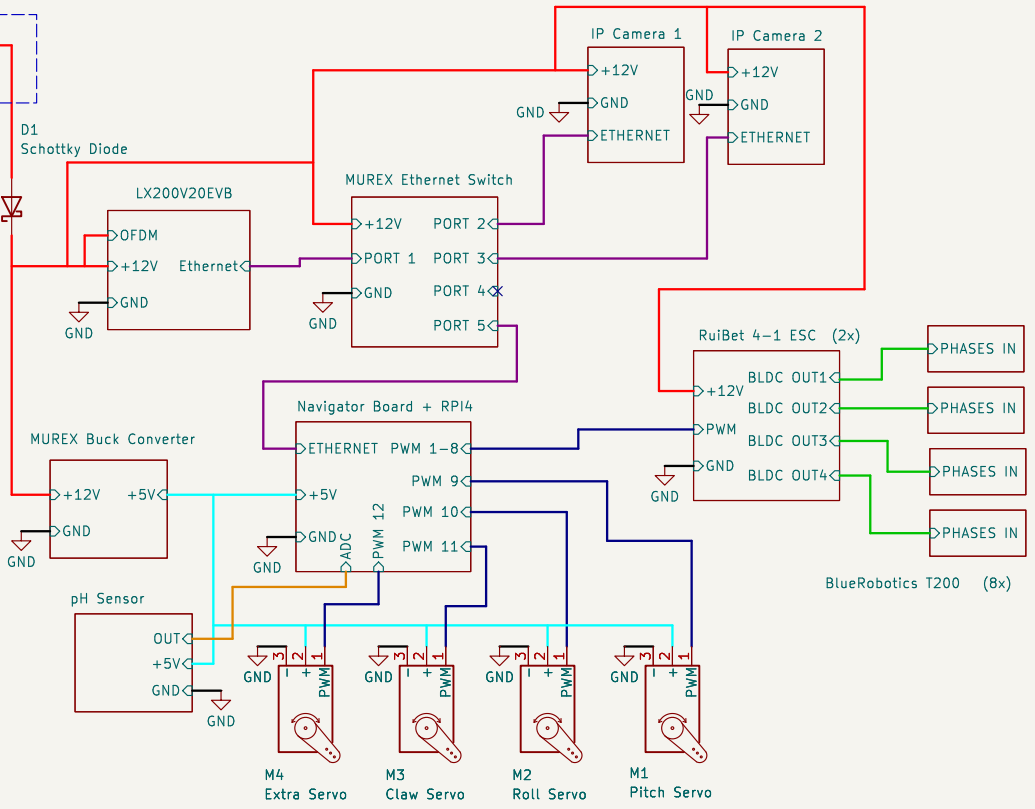
# SYSTEM INTEGRATION DIAGRAM (SID) 0

*Fluid power is not used

## Topside




## Aquatic




## SID Legend

| | |
|---|---|
| 110VAC | 12V |
| GND | 5V |
| PSU DC | PWM |
| HDMI | Ethernet |
| 7V | BLDC Phases |
| Wireless | USB |
| | Analog |

ROV Full Load Amps (FLA) in Water: 24.8A
Fuse selected based upon FLA: 25A ATO

System Integration Diagram (SID)
MUREX ROV V4.0

**MUREX Robotics**

Sheet: /
File: 2025_SID.kicad_sch

***Title: System Integration Diagram***

| | | |
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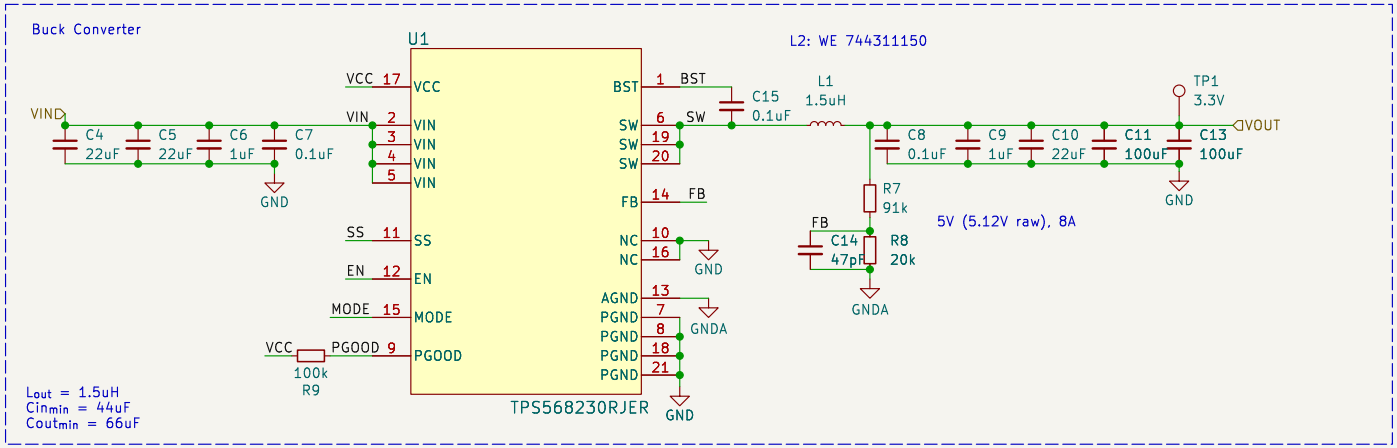
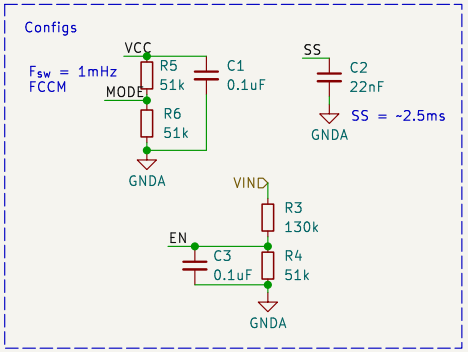
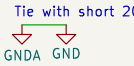
| Size: A4 | Date: 2025-05-14 | **Rev: V1.0** |
| KiCad E.D.A. 9.0.0 | | Id: 1/38 |

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**MUREX Robotics [Max Liu]**

Sheet: /MUREX Buck Converter/
File: untitled.kicad_sch

***Title: Power Board***

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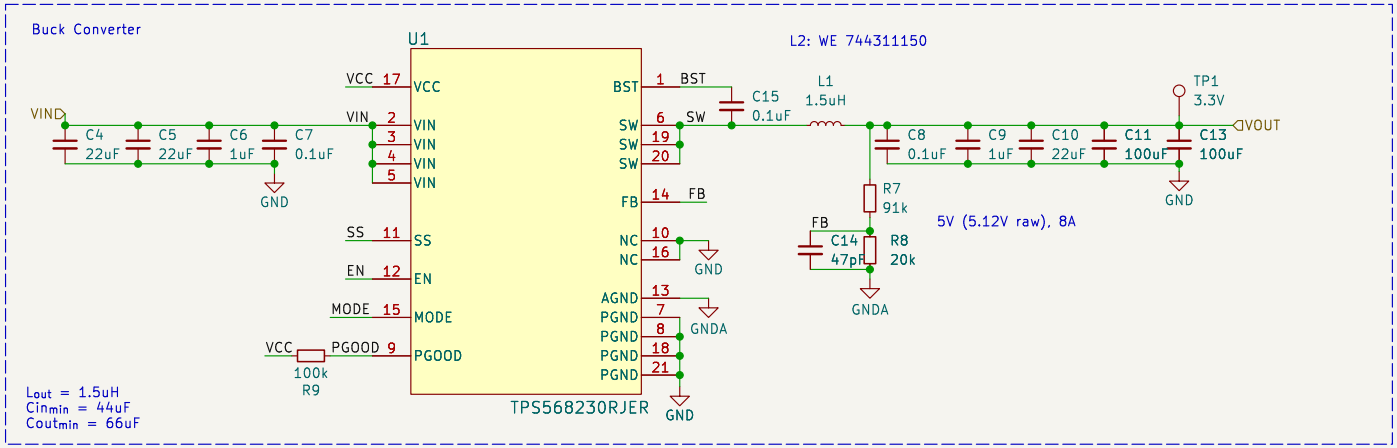


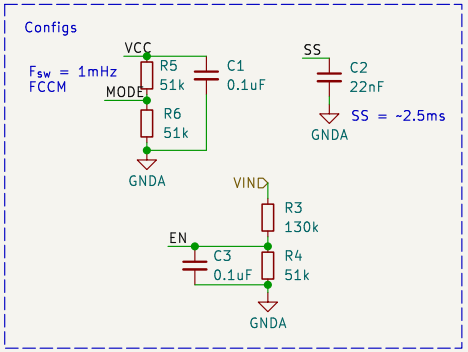


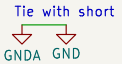


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Sheet: /MUREX Ethernet Switch/
File: untitled.kicad_sch

***Title: Power Board***

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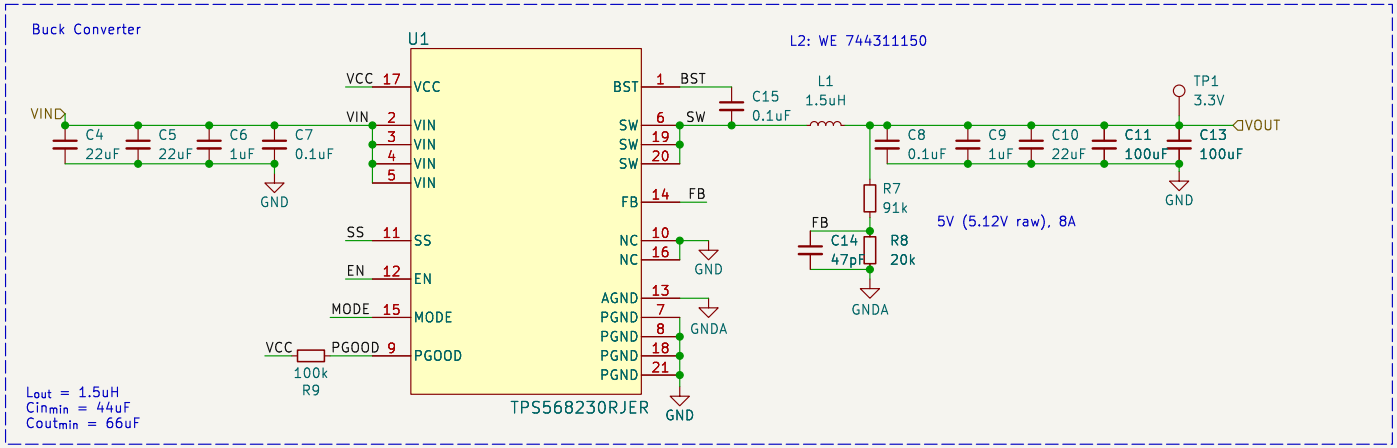


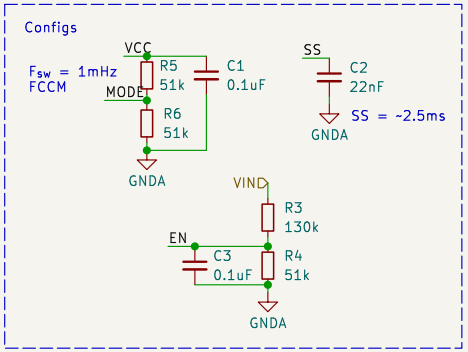


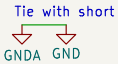


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Sheet: /IP Camera 1/
File: untitled.kicad_sch

***Title: Power Board***

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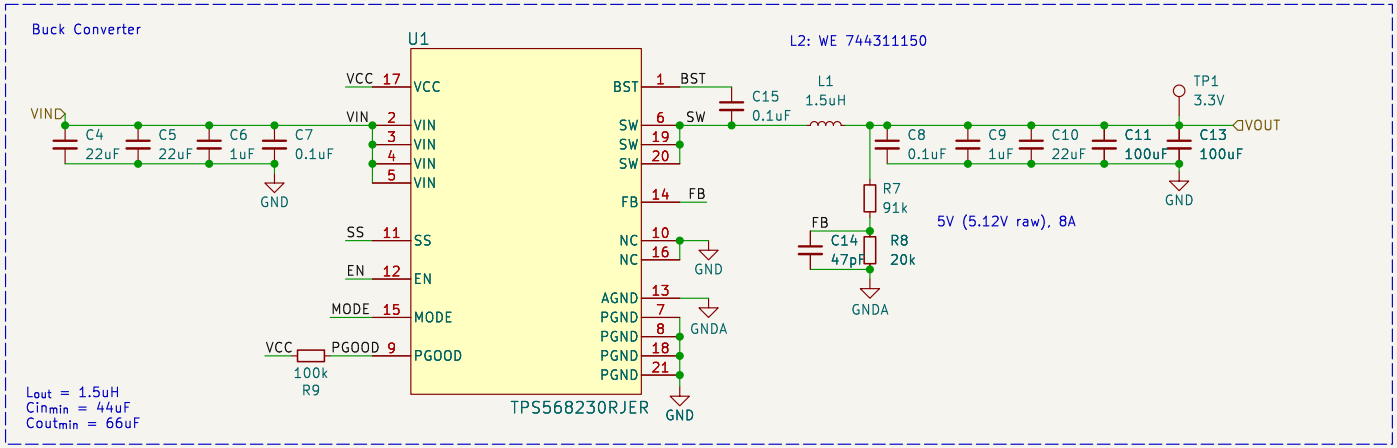


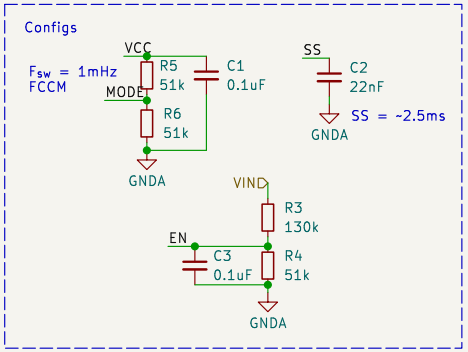


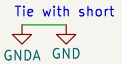


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Sheet: /IP Camera 2/
File: untitled.kicad_sch

***Title: Power Board***

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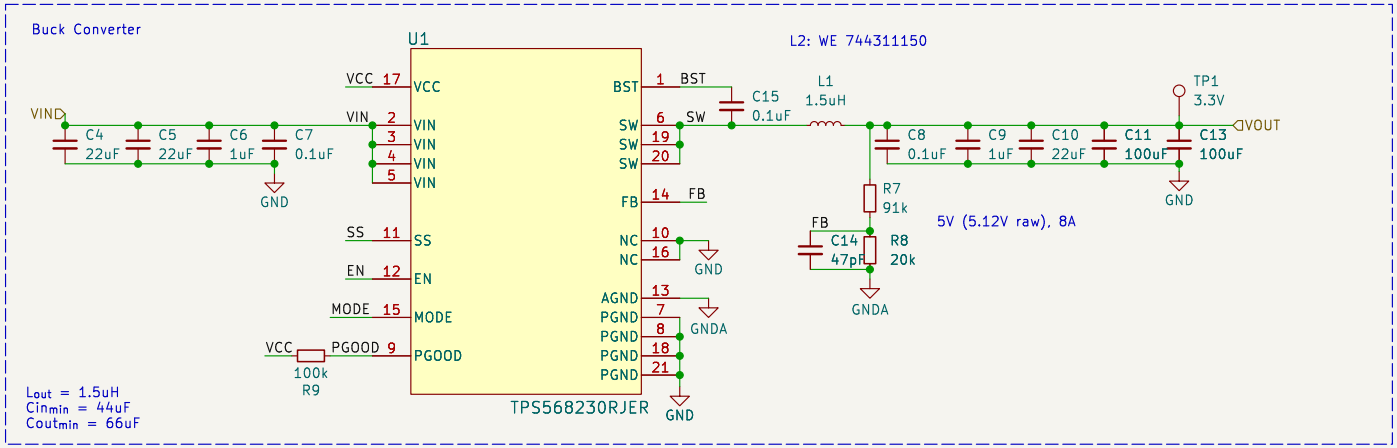


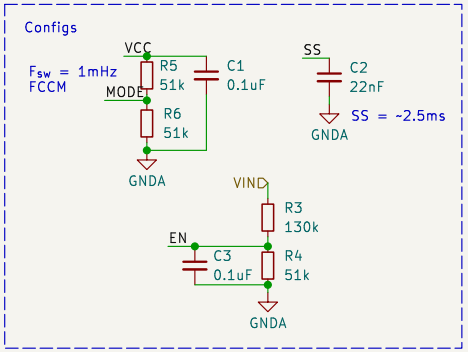


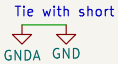


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Sheet: /LX200V20EVB/
File: untitled.kicad_sch

**Title: Power Board**

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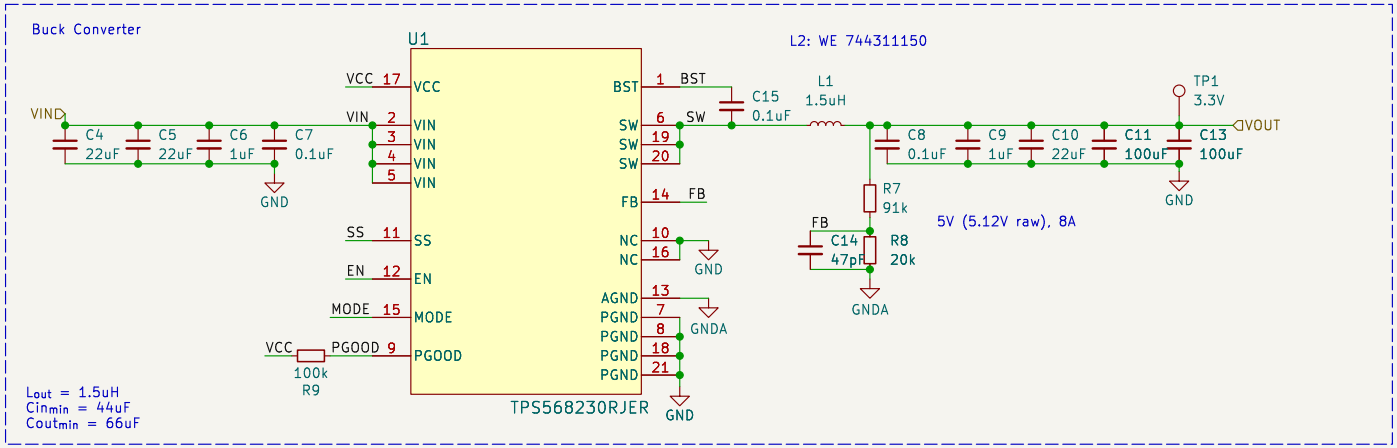


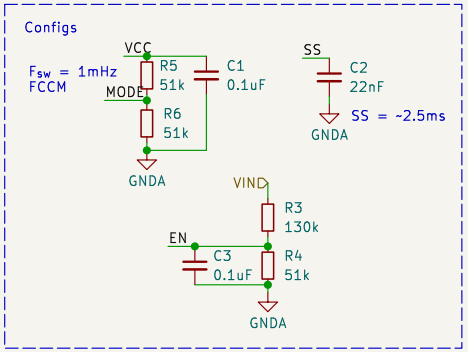


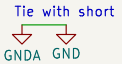


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Sheet: /BlueRobotics T200 (8x)/
File: untitled.kicad_sch

**Title: Power Board**

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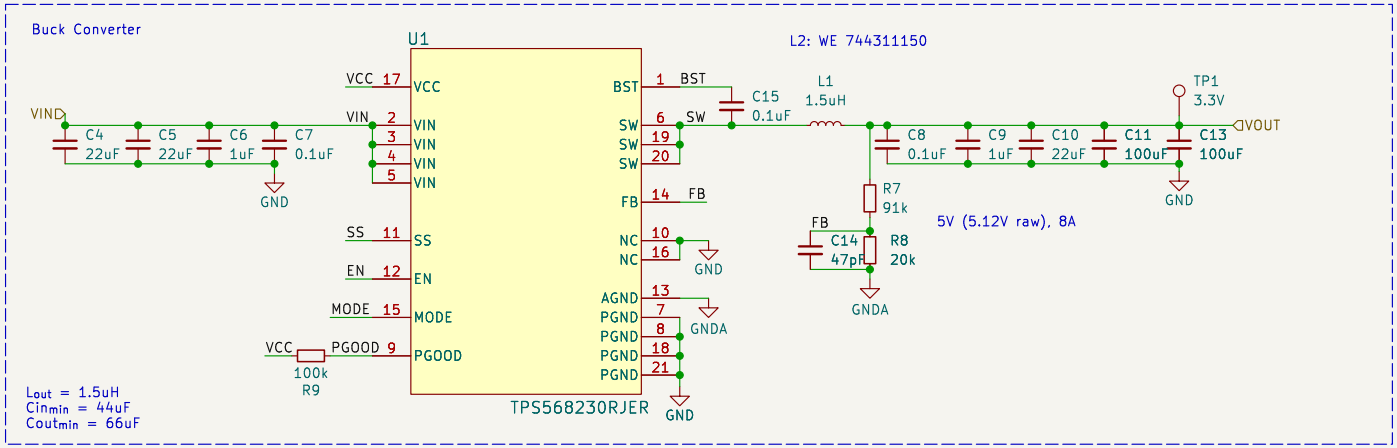


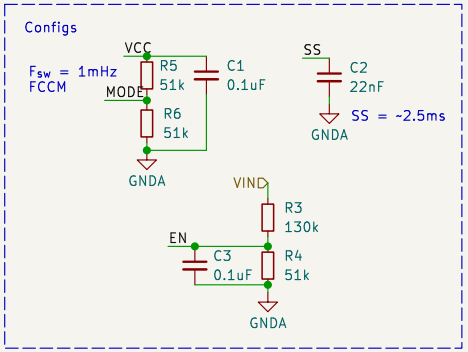


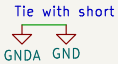


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Sheet: /RuiBet 4-1 ESC (2x)/
File: untitled.kicad_sch

***Title: Power Board***

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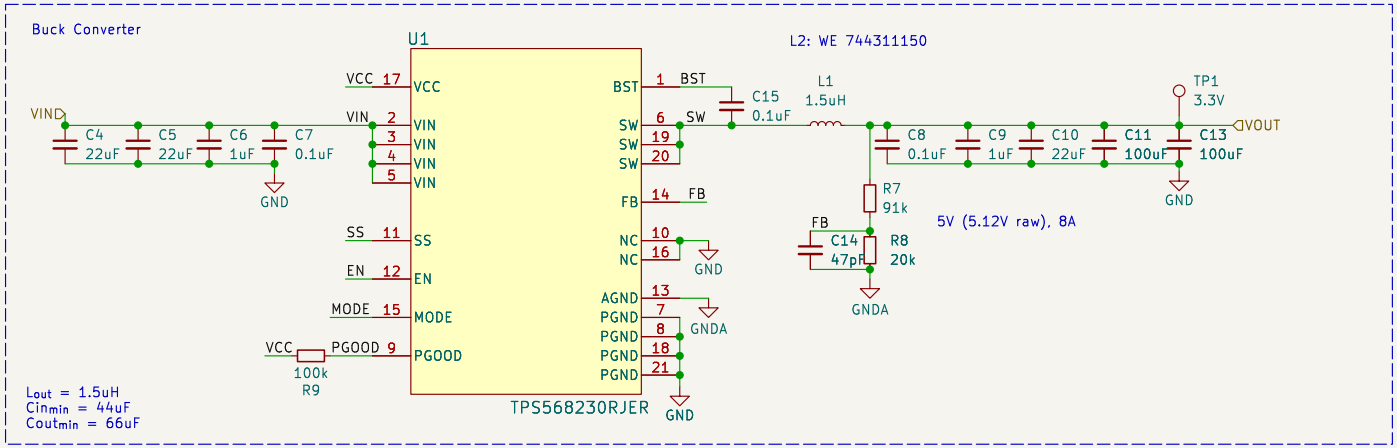


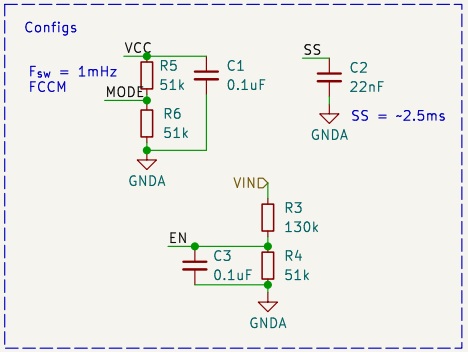


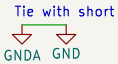


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Sheet: /BlueRobotics T200 8x1/
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***Title: Power Board***

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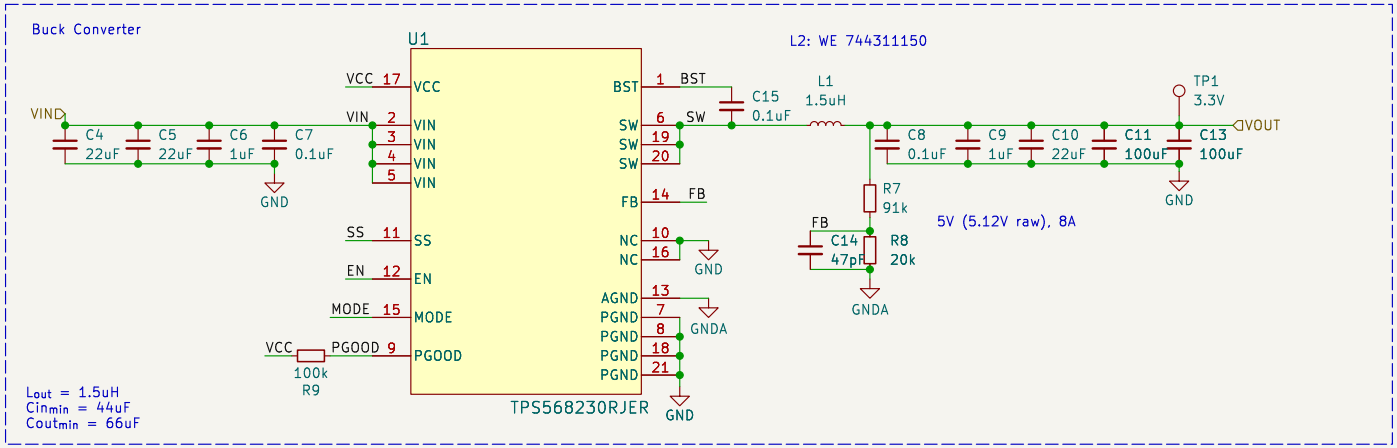


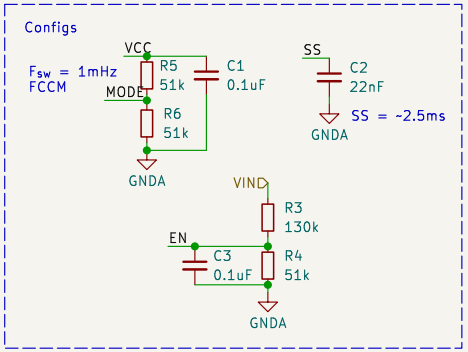


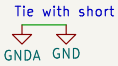


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Sheet: /BlueRobotics T200 8x2/
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***Title: Power Board***

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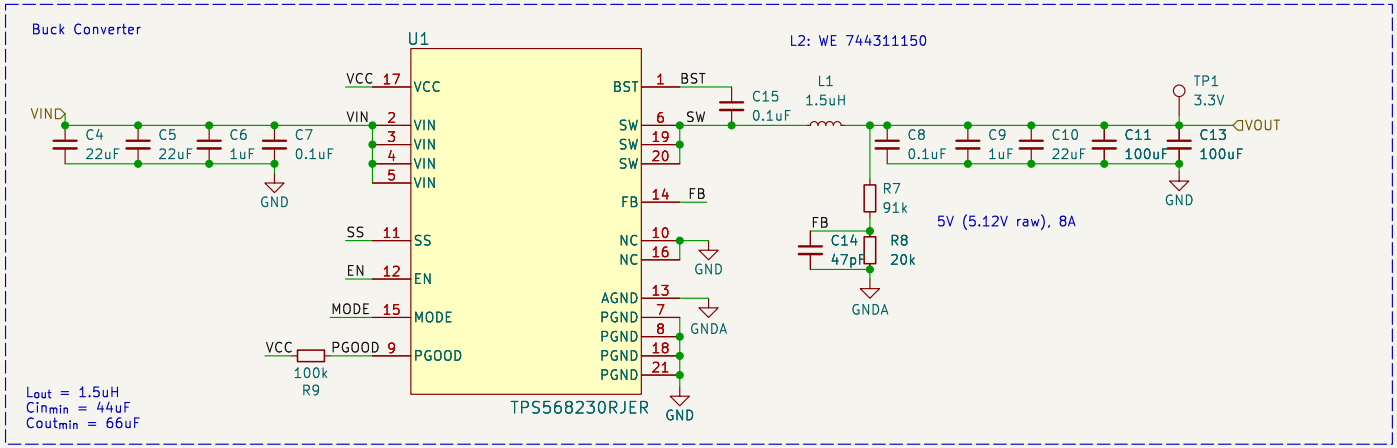


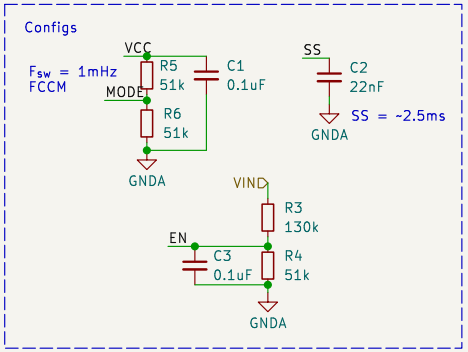


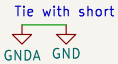


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Sheet: /BlueRobotics T200 8x3/
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**Title: Power Board**

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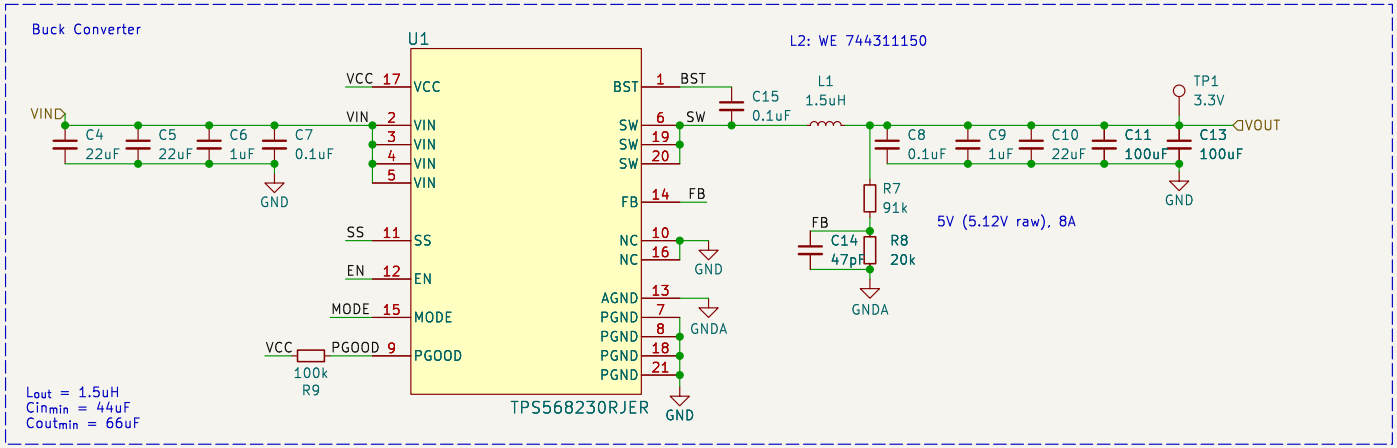


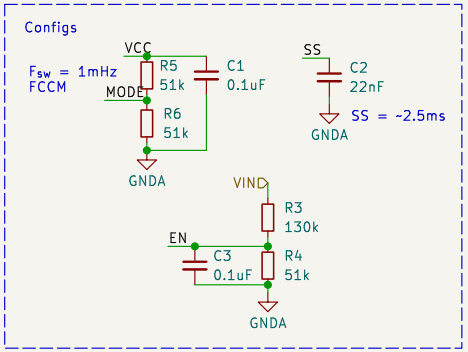


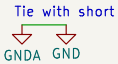


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Sheet: /Navigator Board + RPI4/
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***Title: Power Board***

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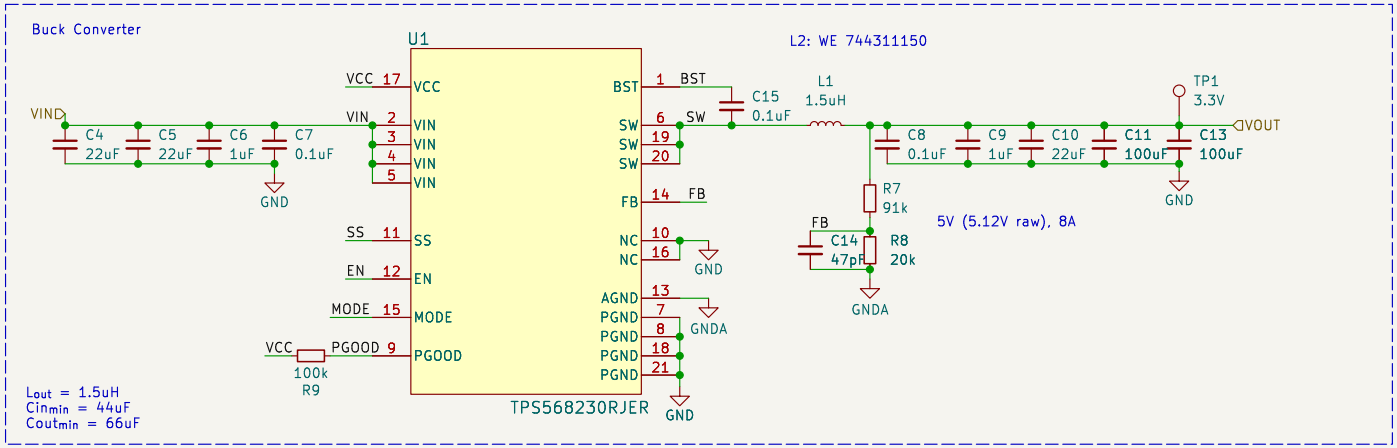


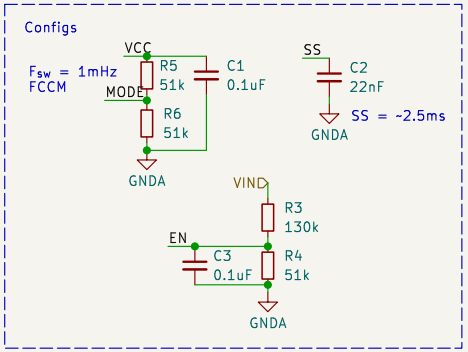


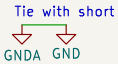


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Sheet: /LX200V20EVB1/
File: untitled.kicad_sch

***Title: Power Board***

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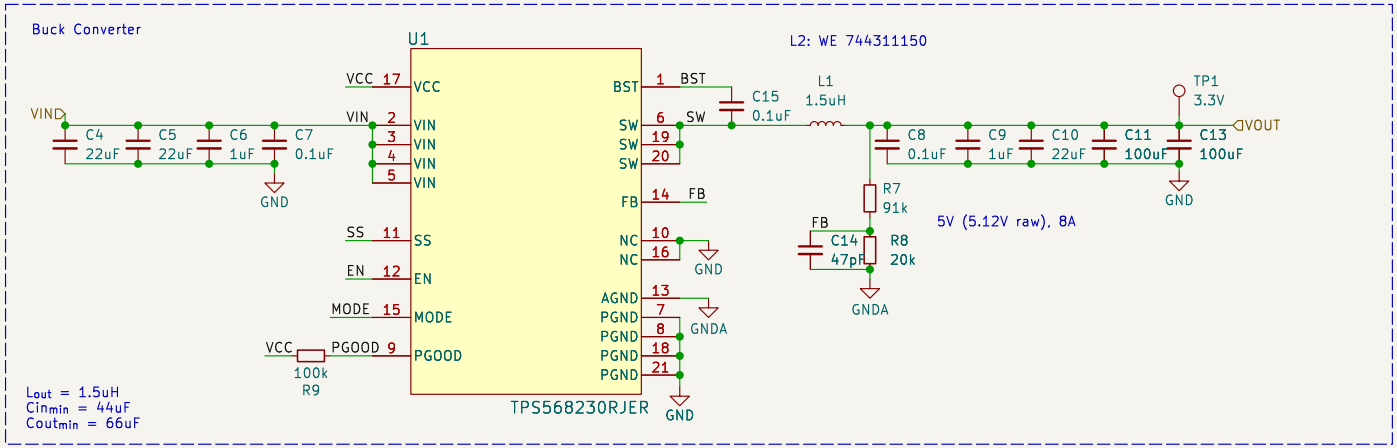


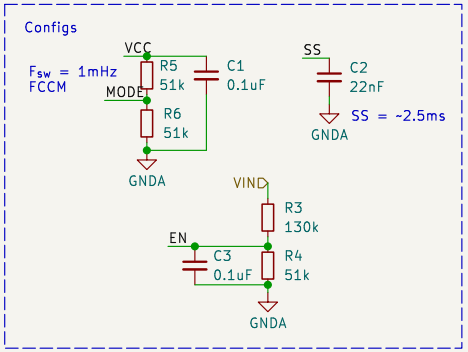


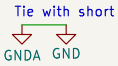


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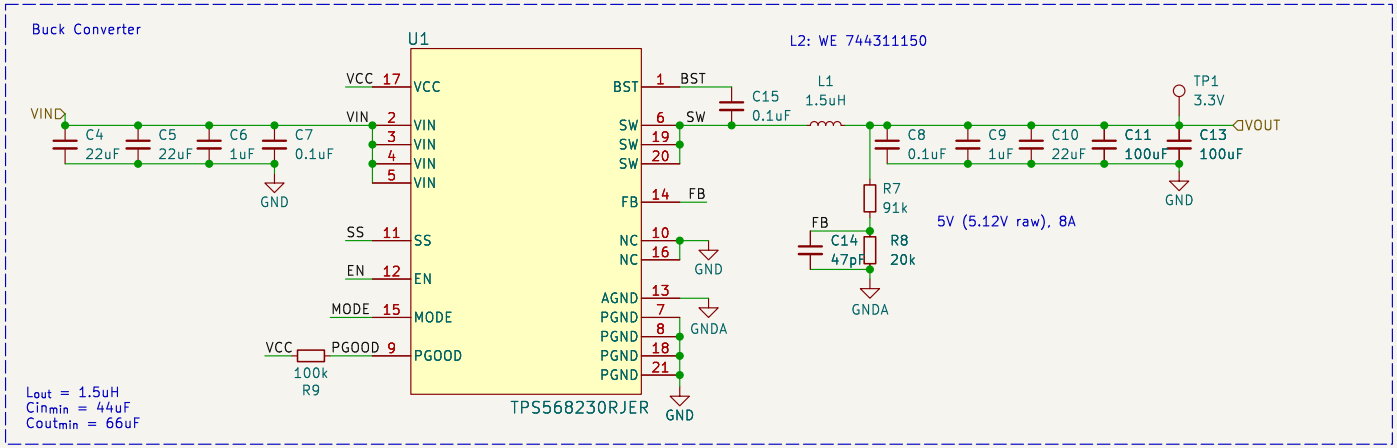
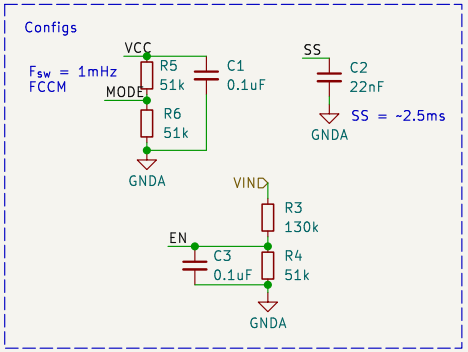
**MUREX Robotics [Max Liu]**

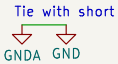
Sheet: /Monitor2 (14in)/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 14/38 |



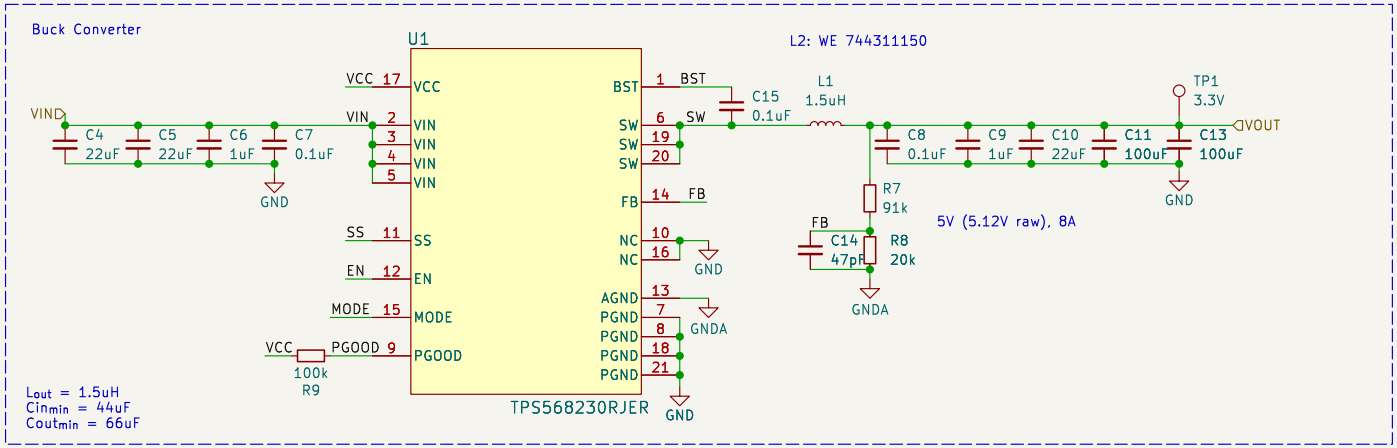

The MUREX Power Board is the world's smallest open-source dual output, high power module designed for ROV applications and other 12V/5V/3.3V DC systems.
// THINK DIFFERENT, THINK MUREX.
// INNOVATION IS OUR OBSESSION.

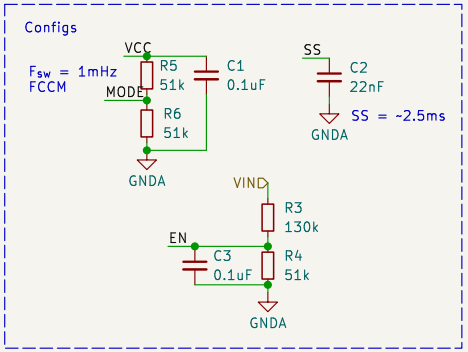
**MUREX Robotics [Max Liu]**

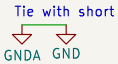
Sheet: /Socket+Switch/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 15/38 |

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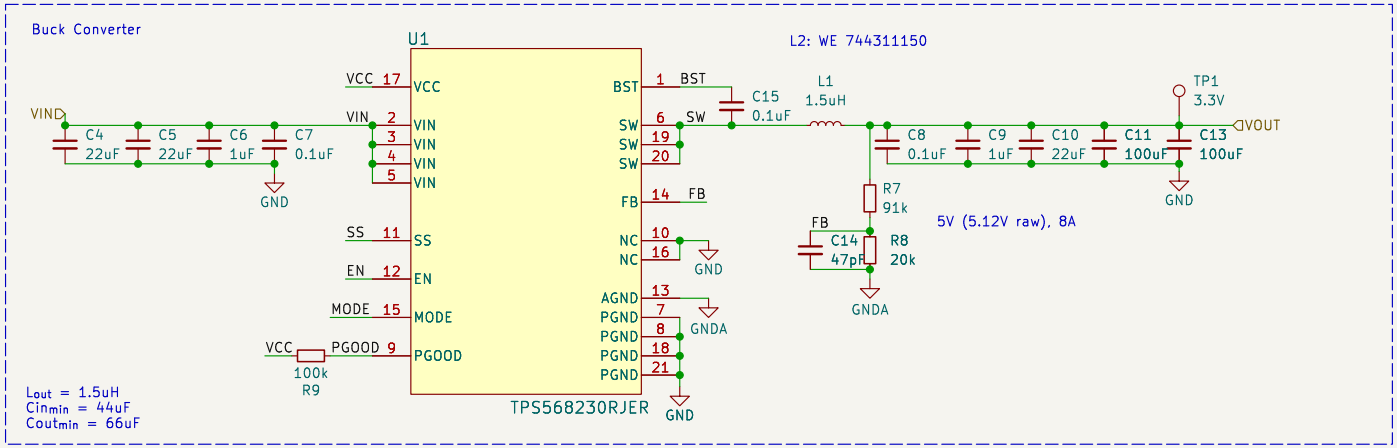
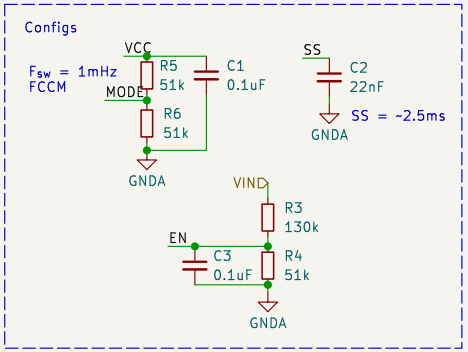
**MUREX Robotics [Max Liu]**

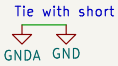
Sheet: /Monitor/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 16/38 |

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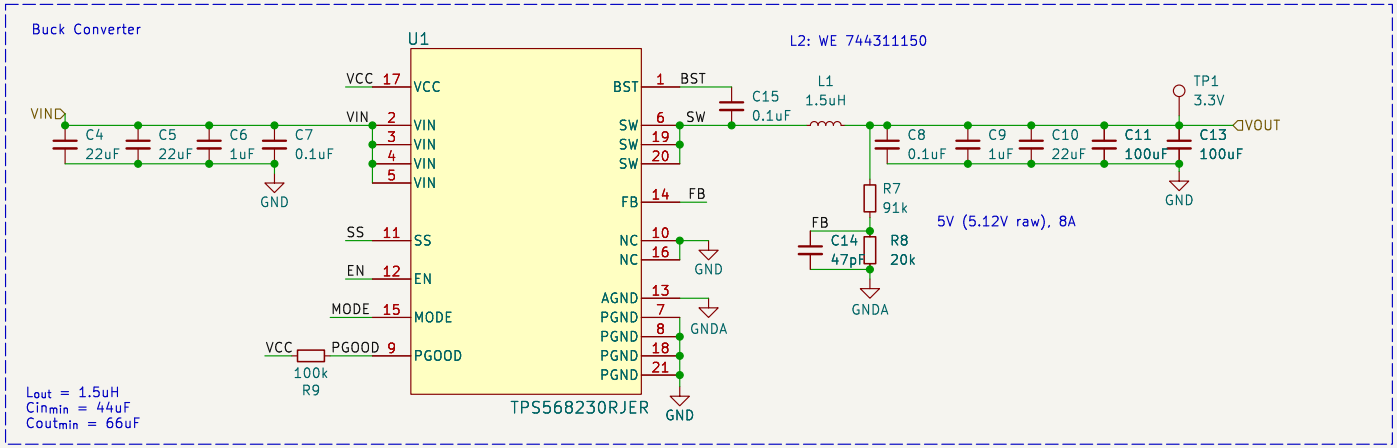
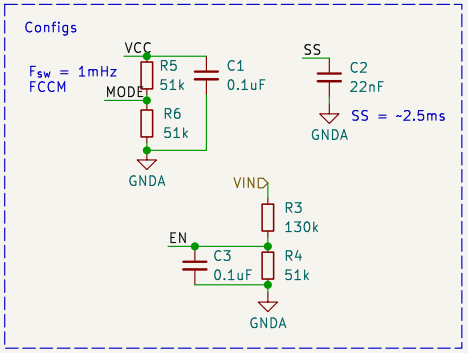
**MUREX Robotics [Max Liu]**

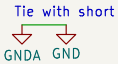
Sheet: /Xbox Controller/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 17/38 |

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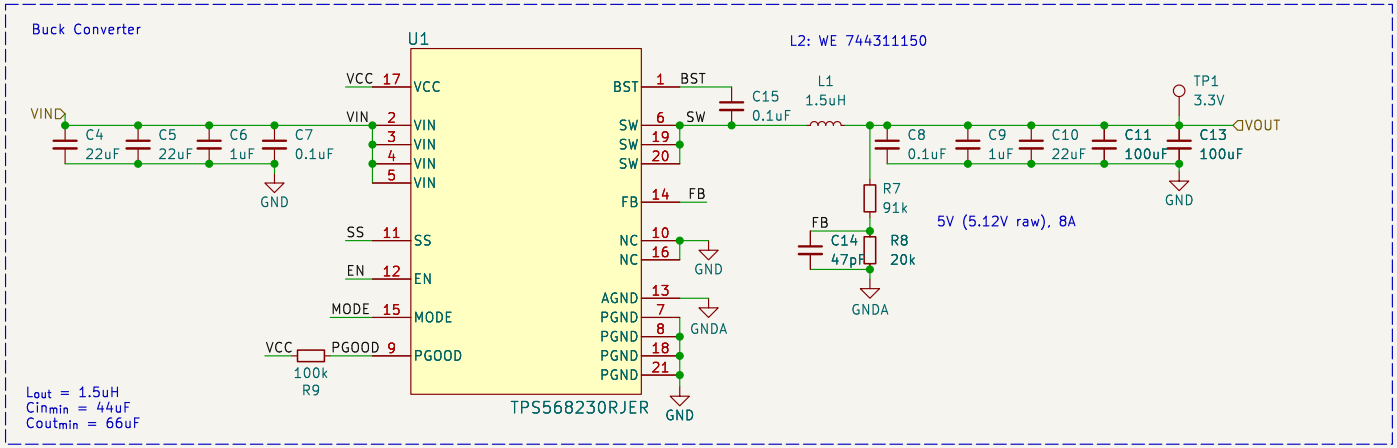
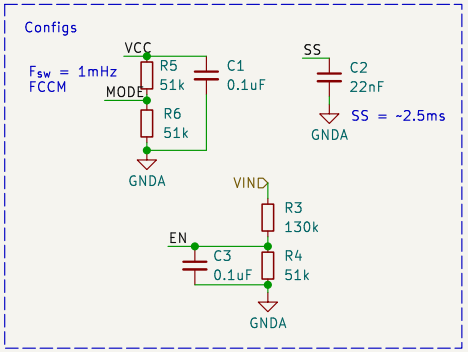
**MUREX Robotics [Max Liu]**

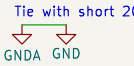
Sheet: /Monitor PSU/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 18/38 |

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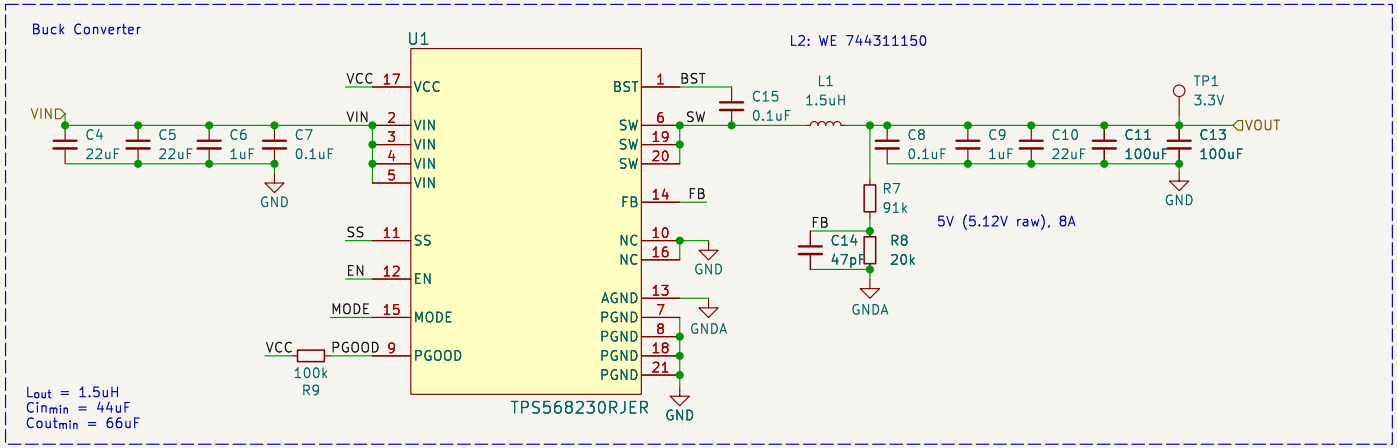
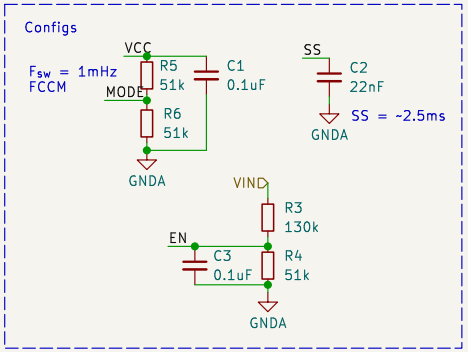
// INNOVATION IS OUR OBSESSION.
**MUREX Robotics [Max Liu]**

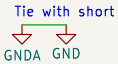
Sheet: /Computer PSU/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 19/38 |

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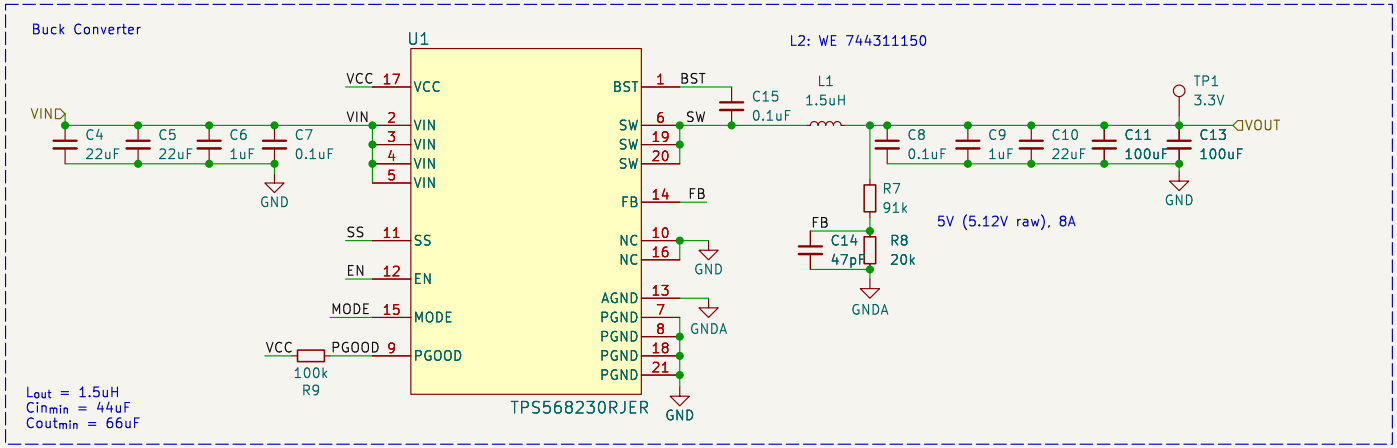
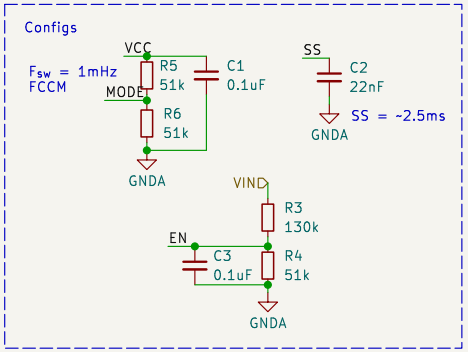
**MUREX Robotics [Max Liu]**

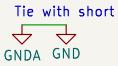
Sheet: /Topside Mac Mini/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 20/38 |

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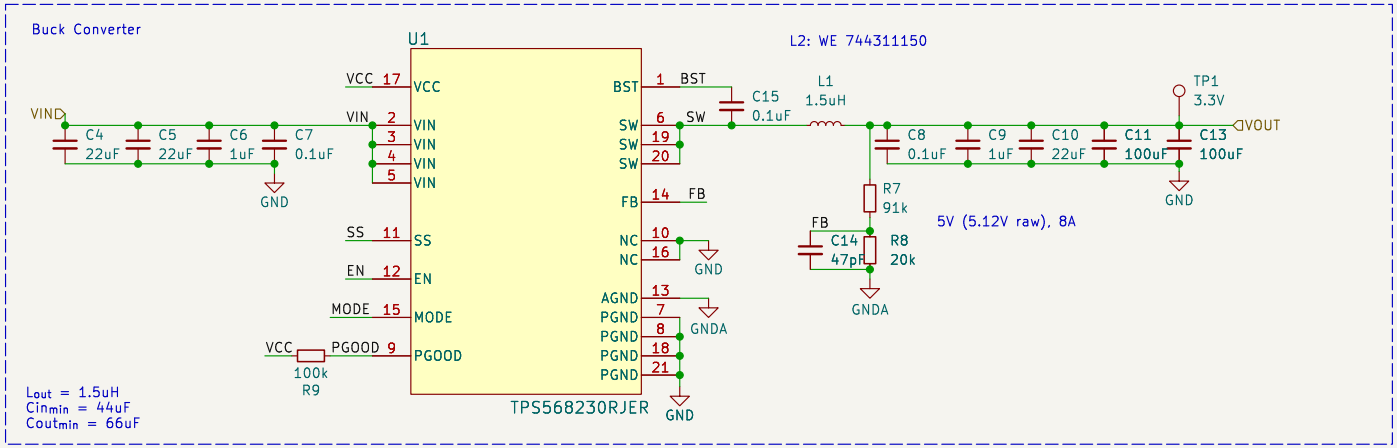
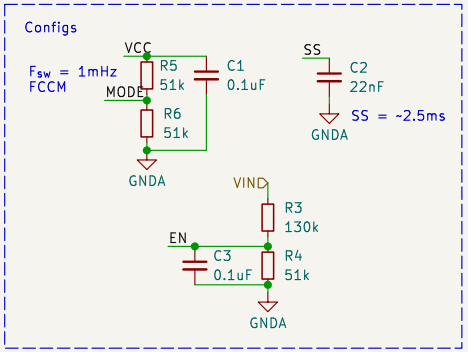
**MUREX Robotics [Max Liu]**

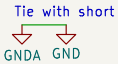
Sheet: /10.3" Touch Display/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 21/38 |

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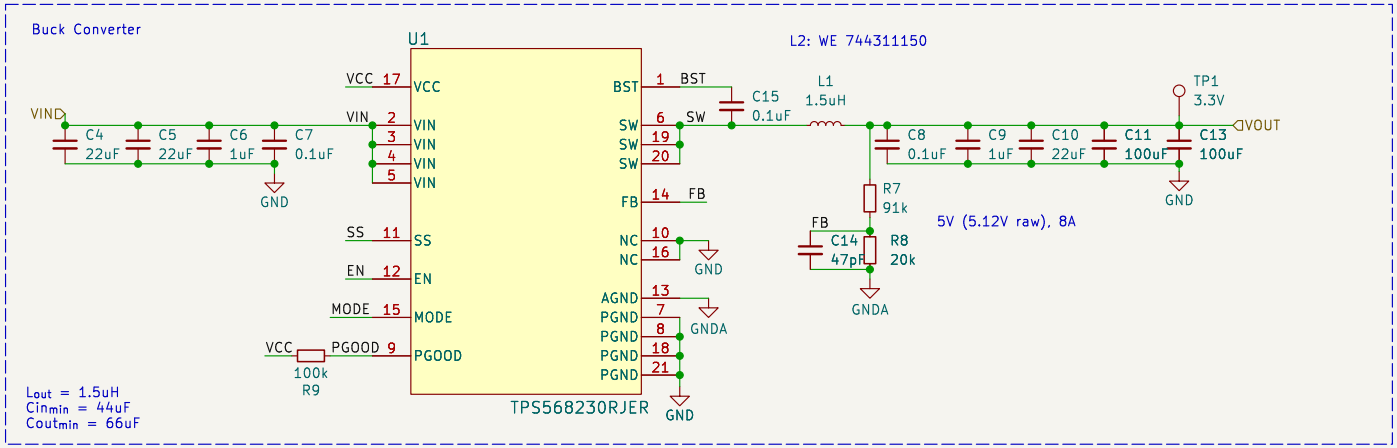
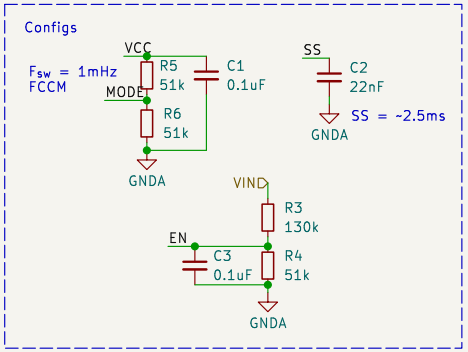
**MUREX Robotics [Max Liu]**

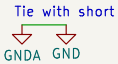
Sheet: /pH Sensor/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 22/38 |

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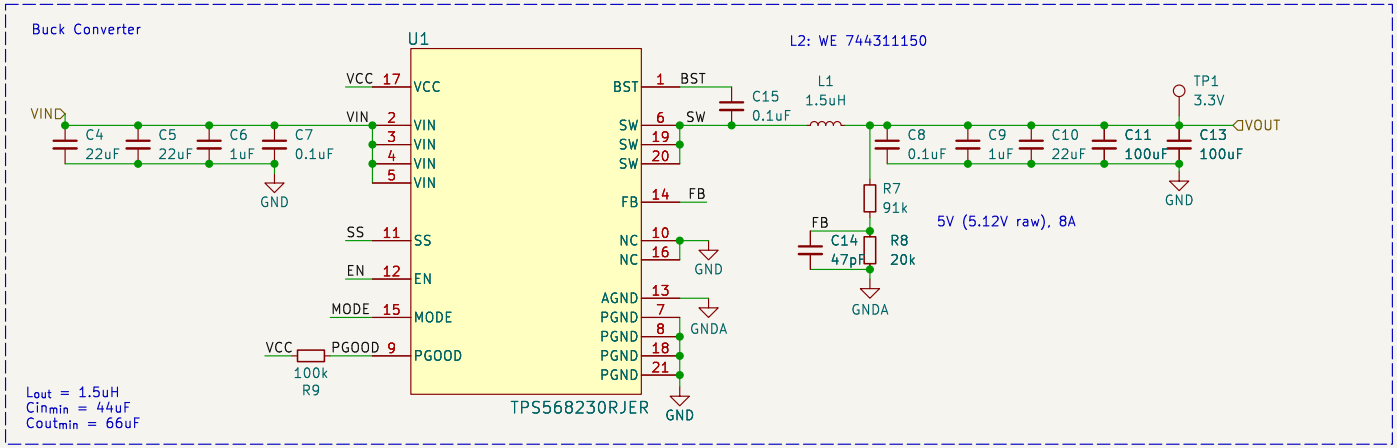
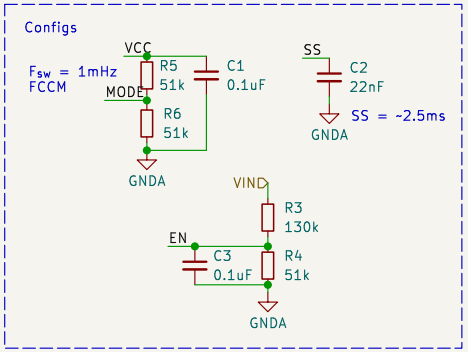
**MUREX Robotics [Max Liu]**

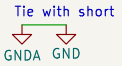
Sheet: /Ethernet Switch/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 23/38 |

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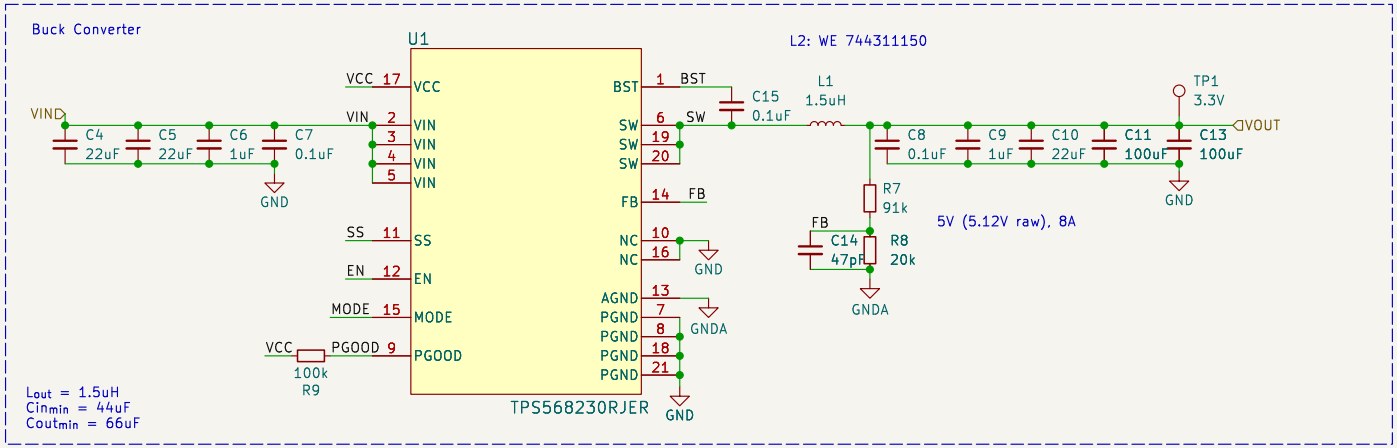
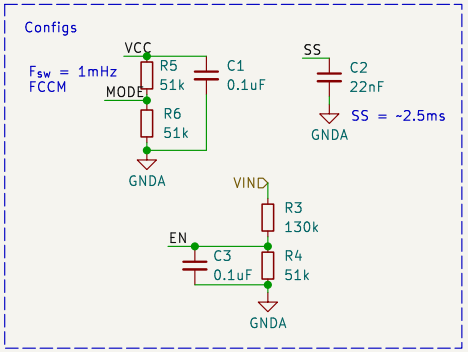
**MUREX Robotics [Max Liu]**

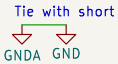
Sheet: /Network Computer/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 24/38 |

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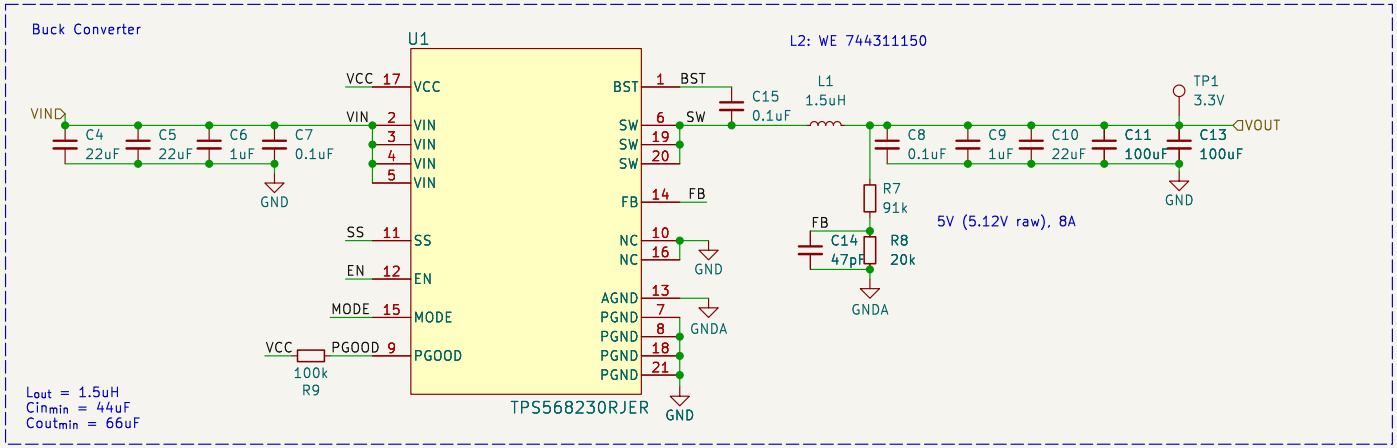
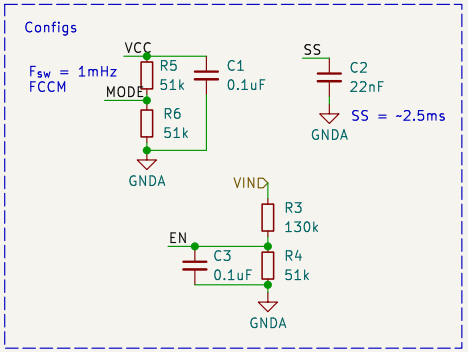
**MUREX Robotics [Max Liu]**

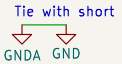
Sheet: /LED PSU and Strip/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 25/38 |

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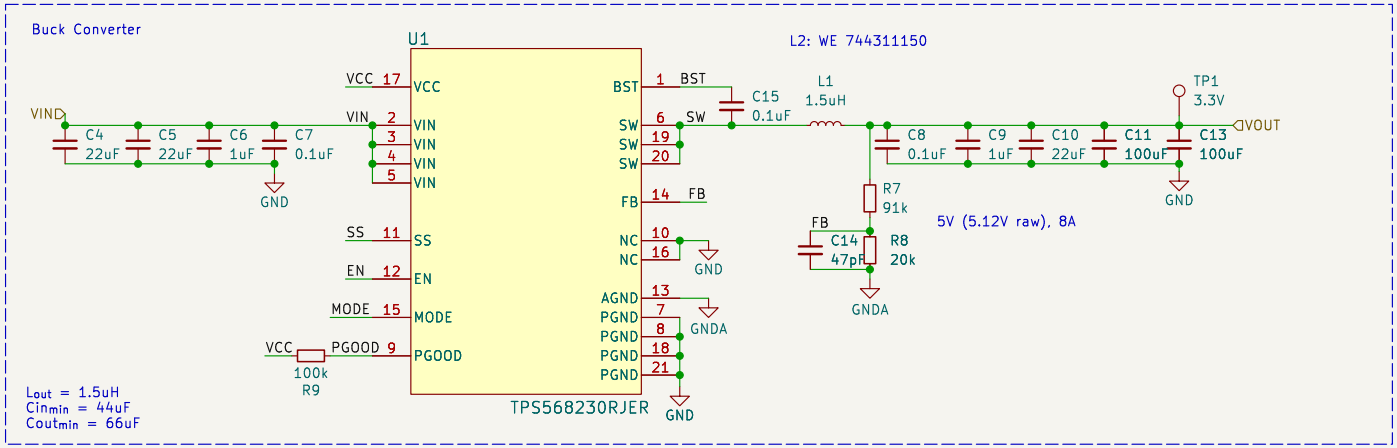
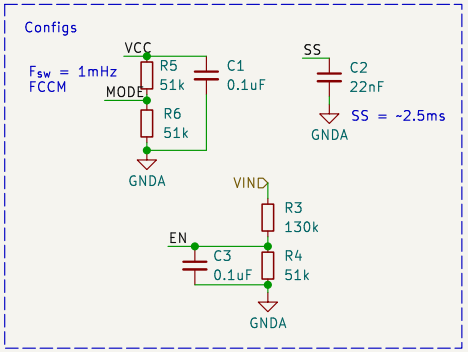
**MUREX Robotics [Max Liu]**

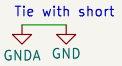
Sheet: /Arduino Nano/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 26/38 |

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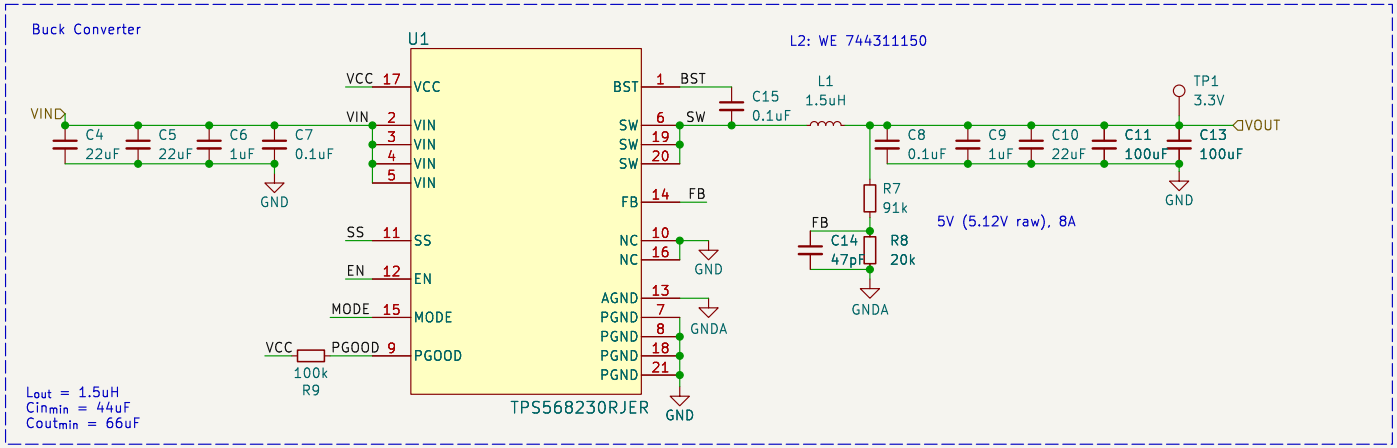
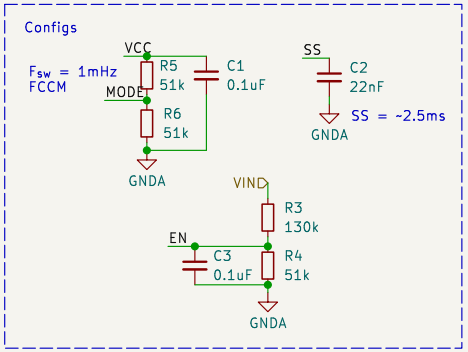
**MUREX Robotics [Max Liu]**

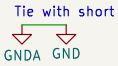
Sheet: /ROCK 5B+/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 27/38 |



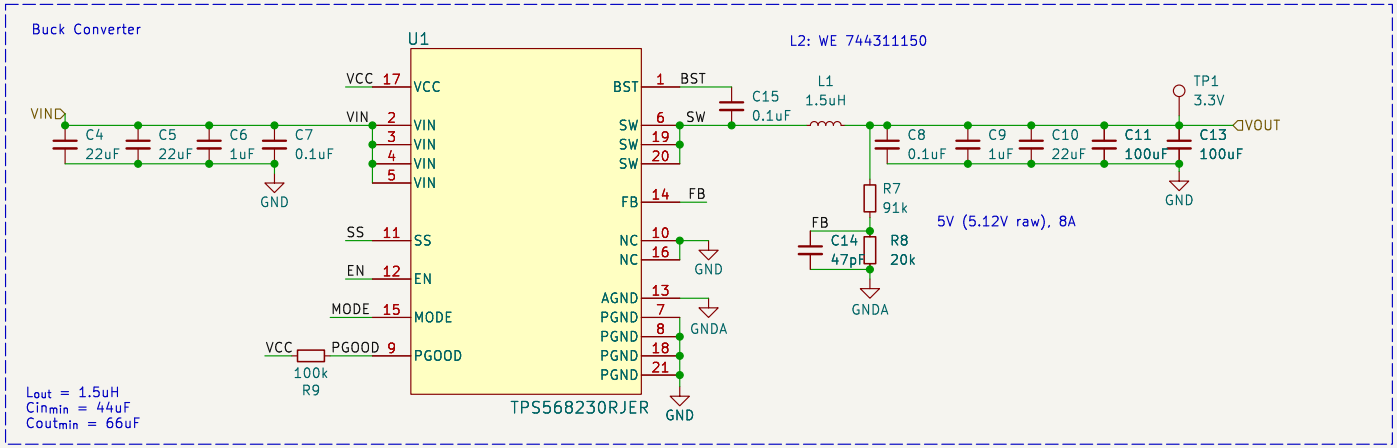

The MUREX Power Board is the world's smallest open-source dual output, high power module designed for ROV applications and other 12V/5V/3.3V DC systems.
// THINK DIFFERENT, THINK MUREX.
// INNOVATION IS OUR OBSESSION.

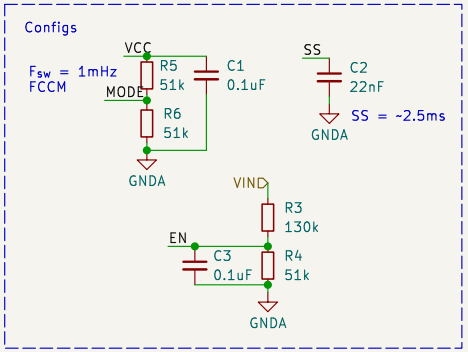
**MUREX Robotics [Max Liu]**

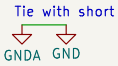
Sheet: /3x Outlets/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 28/38 |

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// THINK DIFFERENT, THINK MUREX.
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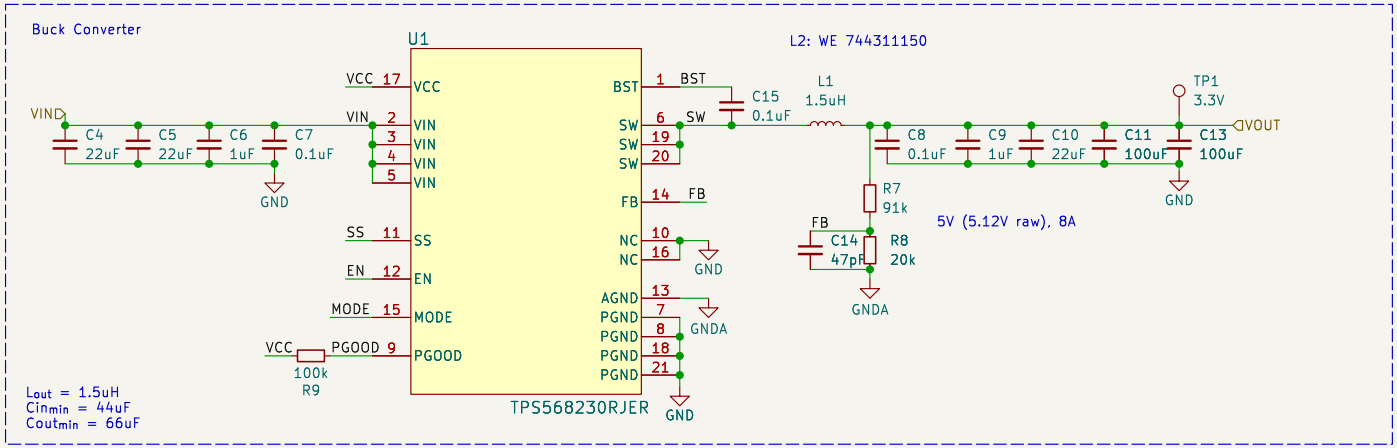
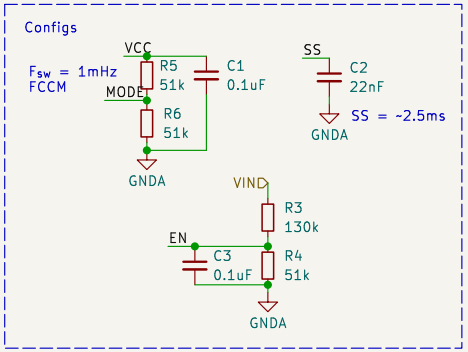
**MUREX Robotics [Max Liu]**

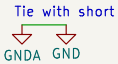
Sheet: /Temp Probes/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 29/38 |

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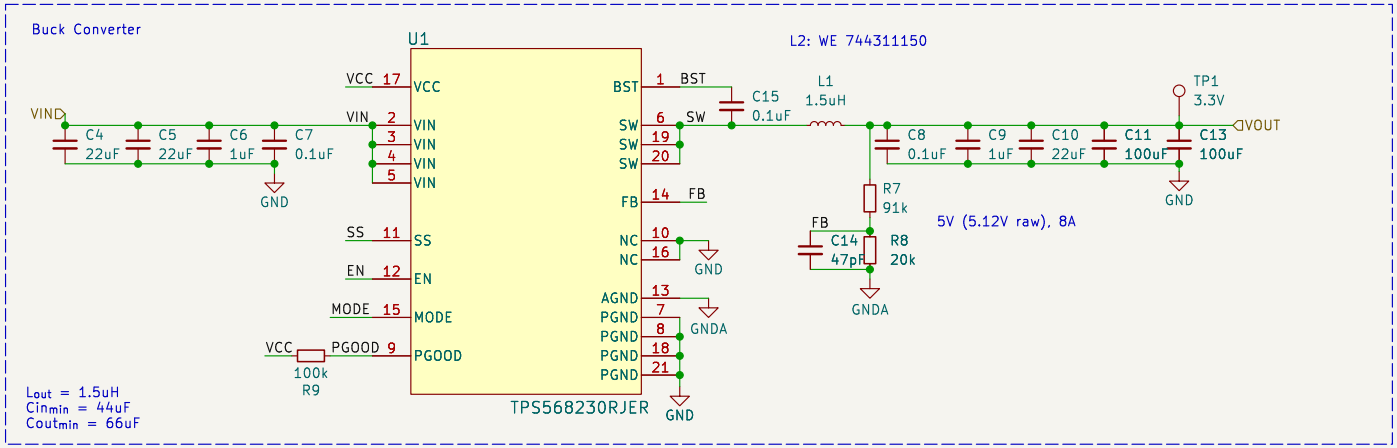
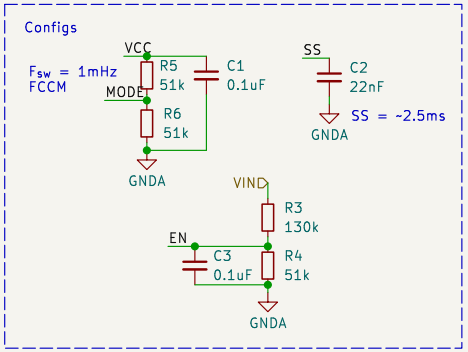
**MUREX Robotics [Max Liu]**

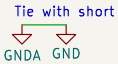
Sheet: /INA Current Sense/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 30/38 |

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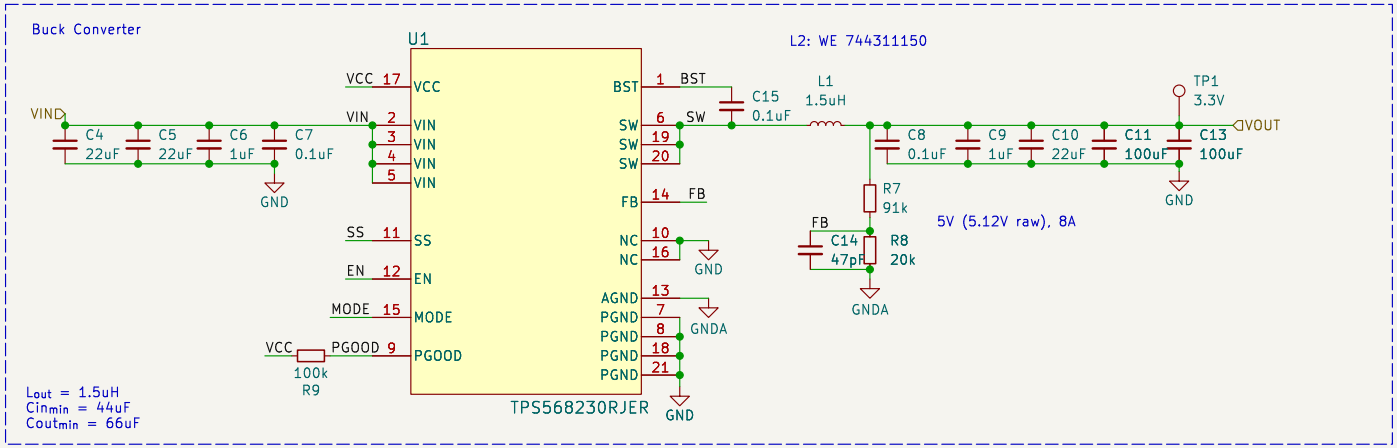
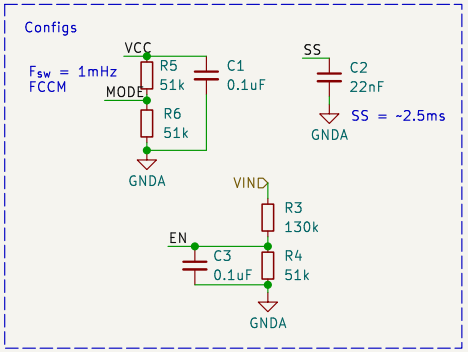
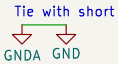
Sheet: /Relay/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 31/38 |

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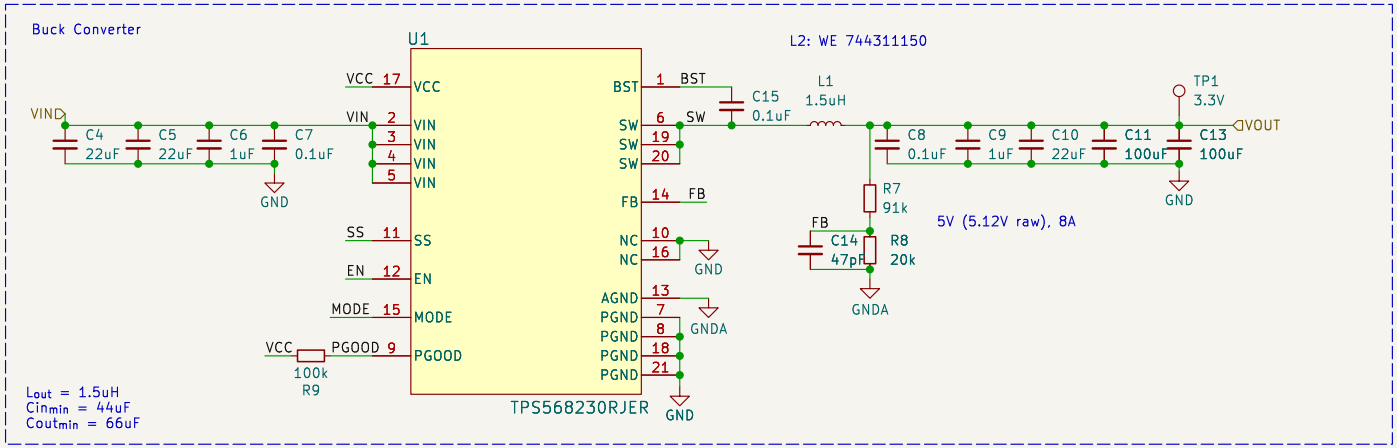
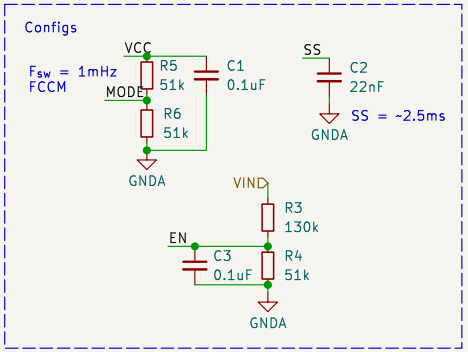
**MUREX Robotics [Max Liu]**

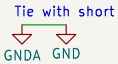
Sheet: /Emergency Stop/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 32/38 |

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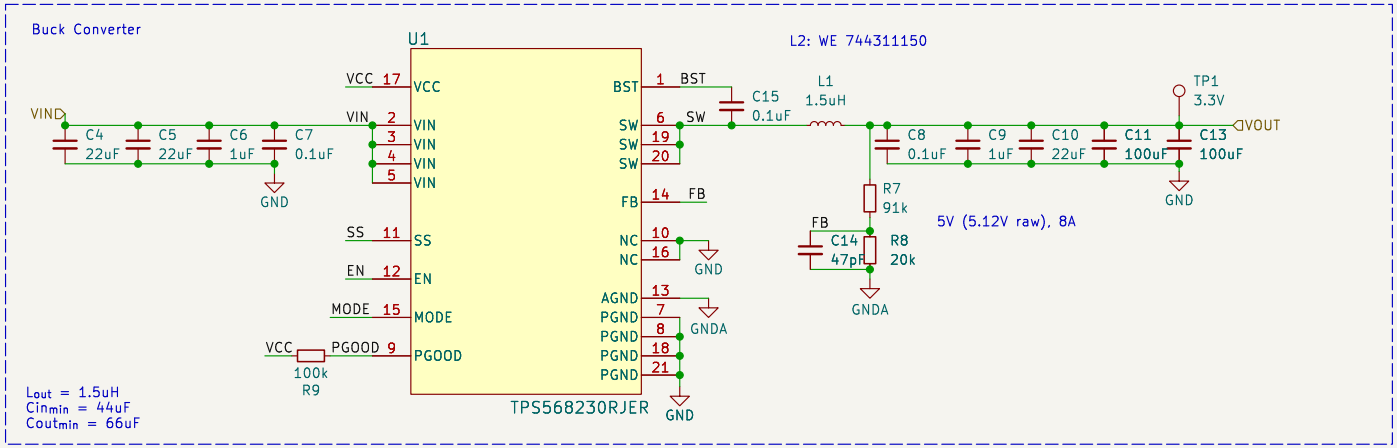
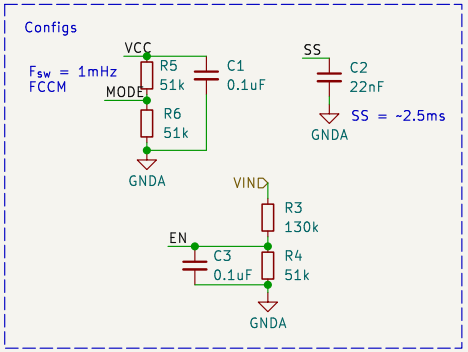
**MUREX Robotics [Max Liu]**

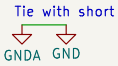
Sheet: /PDB/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 33/38 |

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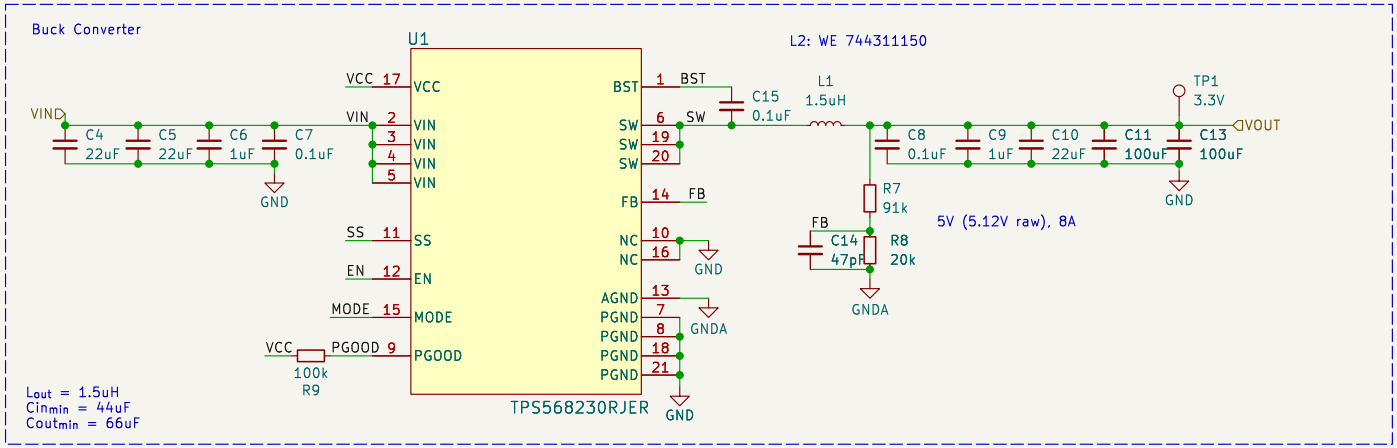
**MUREX Robotics [Max Liu]**

Sheet: /USB Hub + 2.4GHz/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 34/38 |

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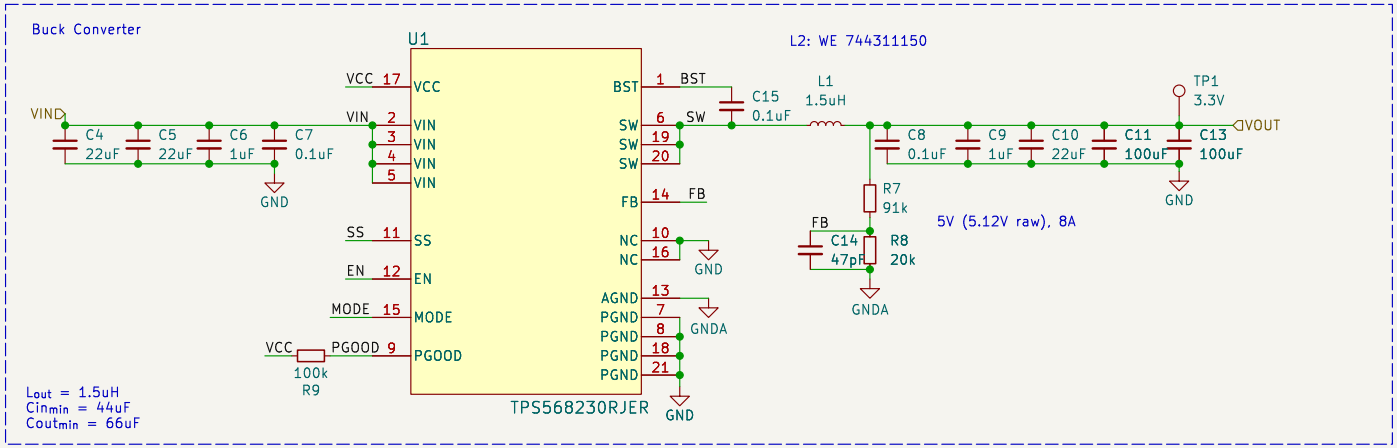
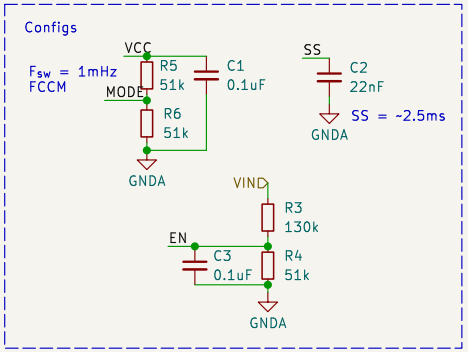
**MUREX Robotics [Max Liu]**

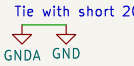
Sheet: /Keyboard+Mouse/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 35/38 |

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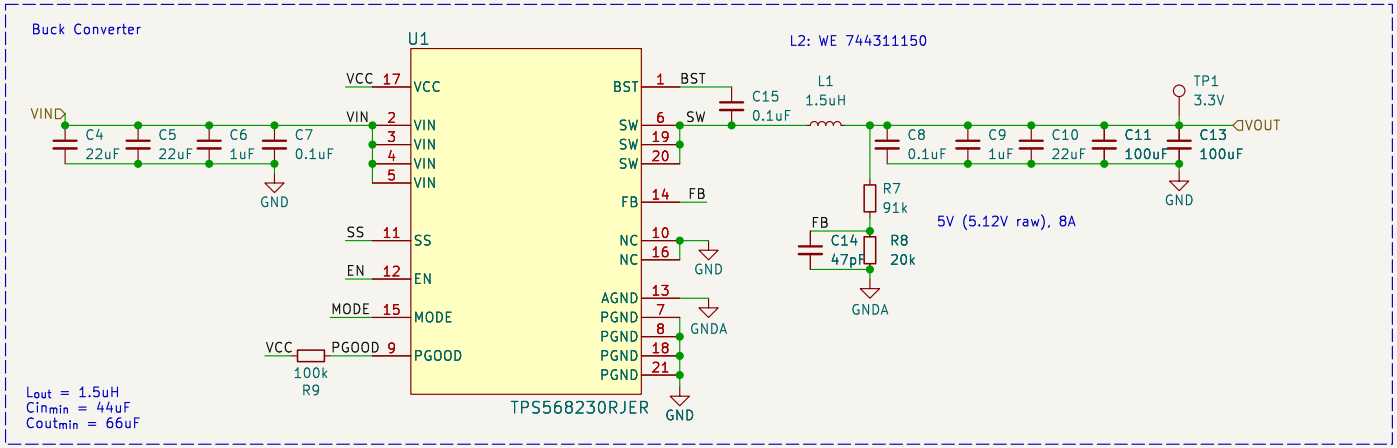
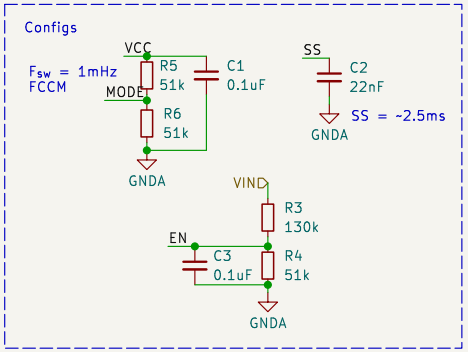
**MUREX Robotics [Max Liu]**

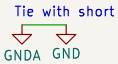
Sheet: /ROCK PSU/
File: untitled.kicad_sch

**Title: Power Board**

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 36/38 |

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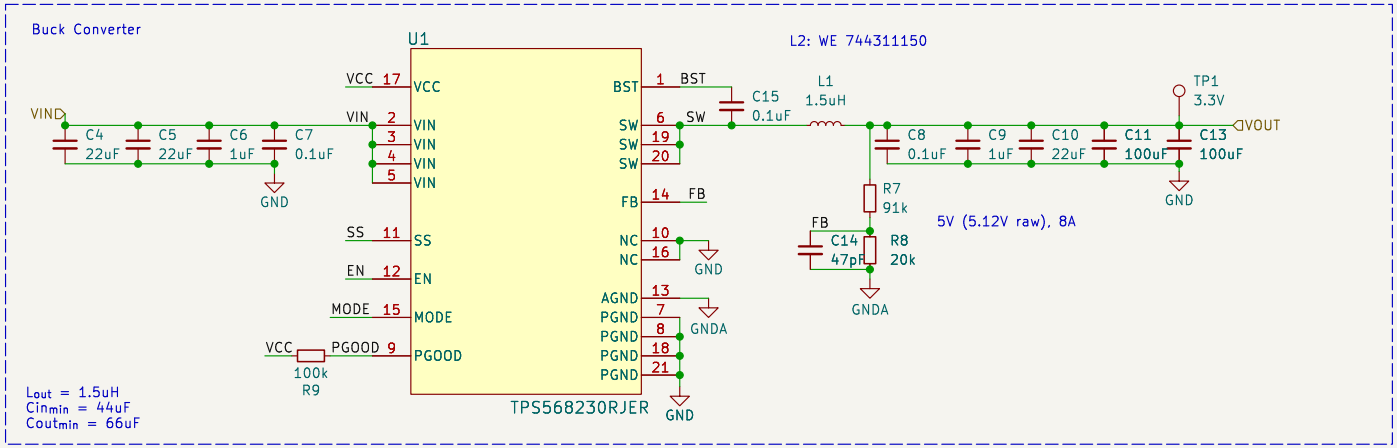
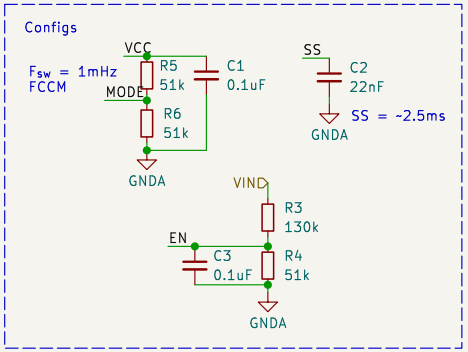
**MUREX Robotics [Max Liu]**

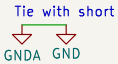
Sheet: /Spectrum Analyzer/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 37/38 |

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Sheet: /LXV PSU/
File: untitled.kicad_sch

***Title: Power Board***

| Size: A4 | Date: 2023-11-27 | **Rev: V2.0** |
|---|---|---|
| KiCad E.D.A. 9.0.0 | | Id: 38/38 |