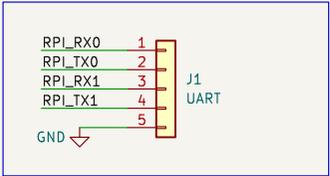


- H1 MountingHole
- H2 ESD Symbol
- H3 KICAD Symbol
- H4 OSHW Symbol

- H5 CM4 GPIO Hirose 2x50
- H6 CM4 High Speed Hirose 2x50



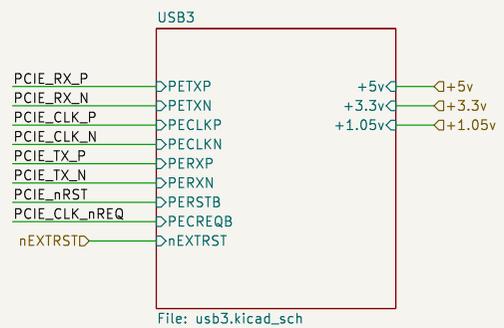
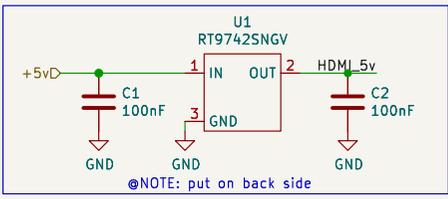
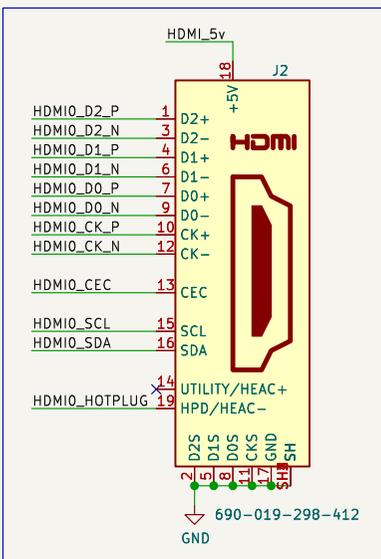
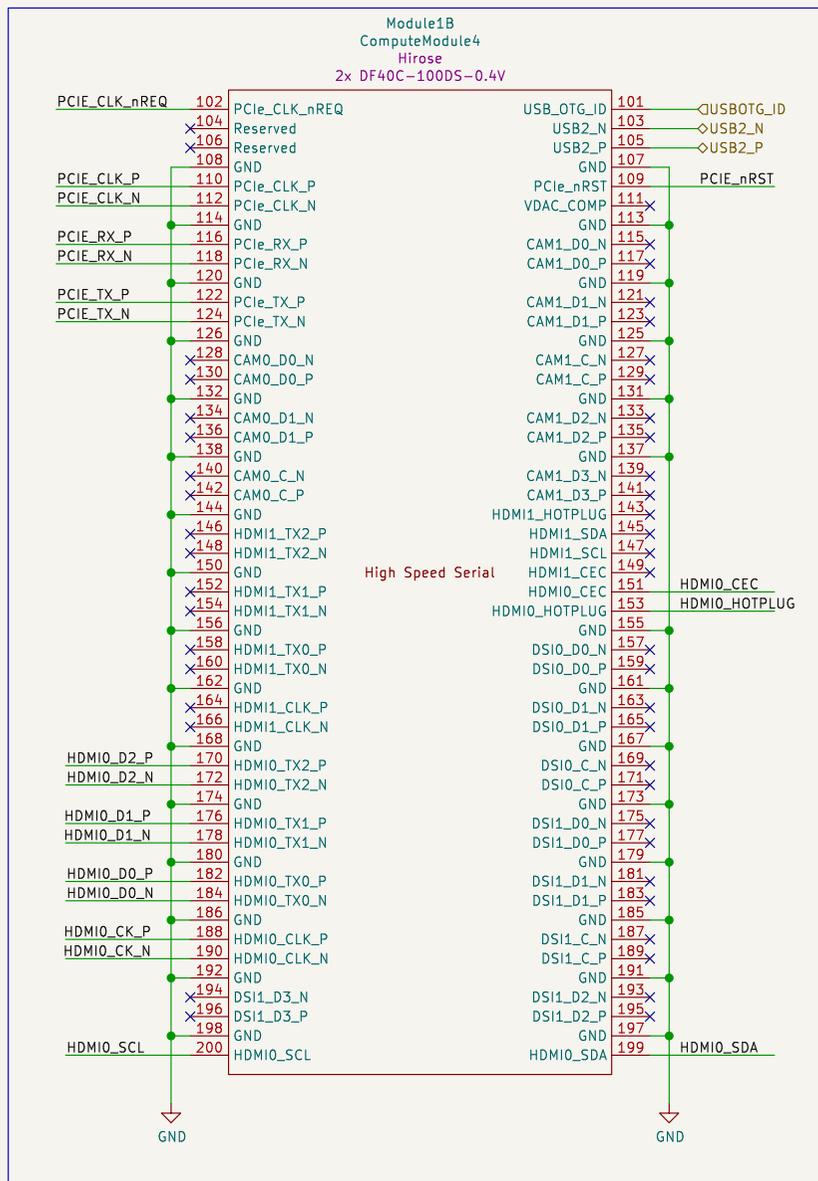
The MUREX Carrier Board is the world's first open-source CM4-based ROV (robotics) control board.  
 // ATTEMPT THE IMPOSSIBLE  
 // DO IT RIGHT, DO IT MUREX  
**MUREX Robotics [Byran Huang]**

Sheet: /  
 File: carrier.kicad\_sch

**Title: Carrier Board**

Size: A4 Date: 2023-12-30  
 KiCad E.D.A. 9.0.0

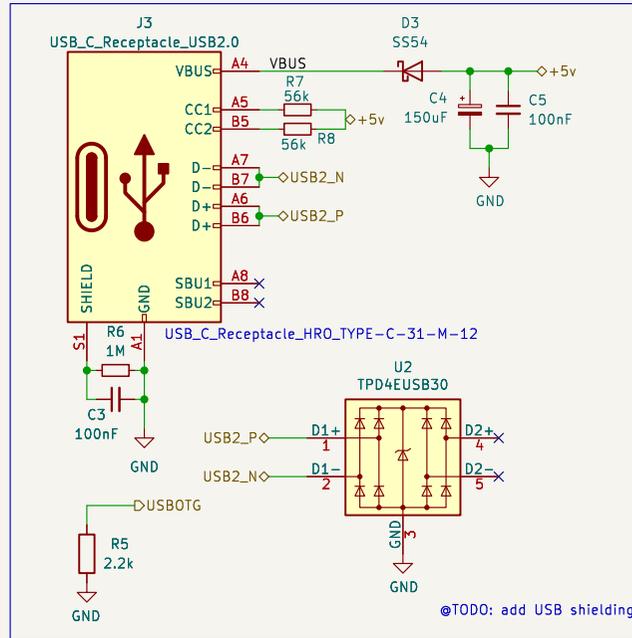
Rev: V3.1  
 Id: 1/13



The MUREX Carrier Board is the world's first open-source CM4-based ROV (robotics) control board.  
 // ATTEMPT THE IMPOSSIBLE  
 // DO IT RIGHT, DO IT MUREX  
**MUREX Robotics [Byran Huang]**  
 Sheet: /CM4\_HighSpeed/  
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**Title: Carrier Board**

Size: A4	Date: 2023-12-30	Rev: V3.1
KiCad E.D.A. 9.0.0		Id: 2/13



The MUREX Carrier Board is the world's first open-source  
CM4-based ROV (robotics) control board.

// ATTEMPT THE IMPOSSIBLE  
// DO IT RIGHT, DO IT MUREX

**MUREX Robotics [Byran Huang]**

Sheet: /USB2/  
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**Title: Carrier Board**

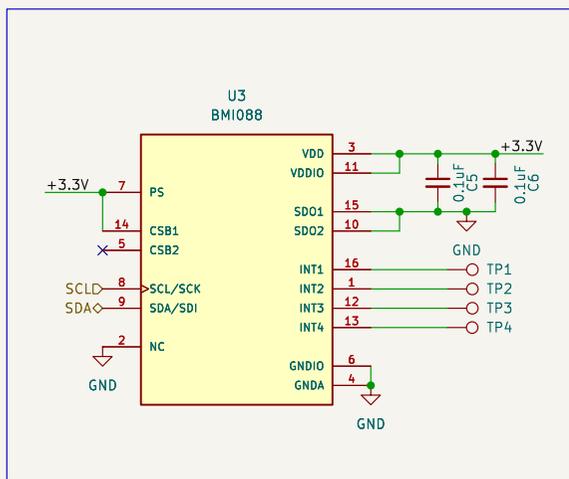
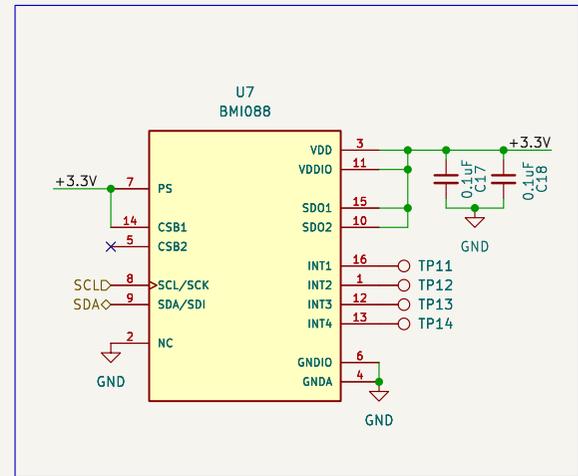
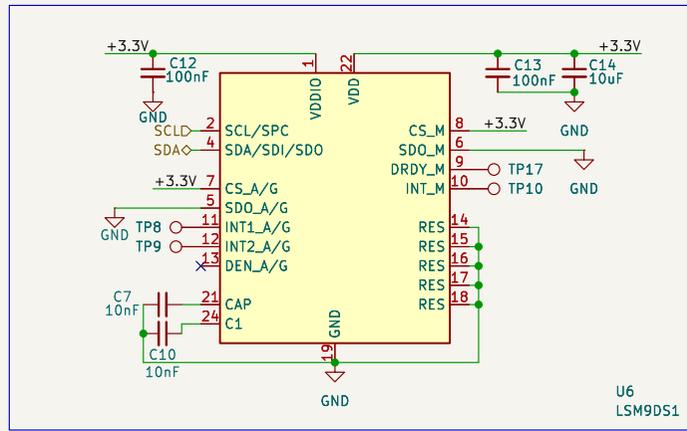
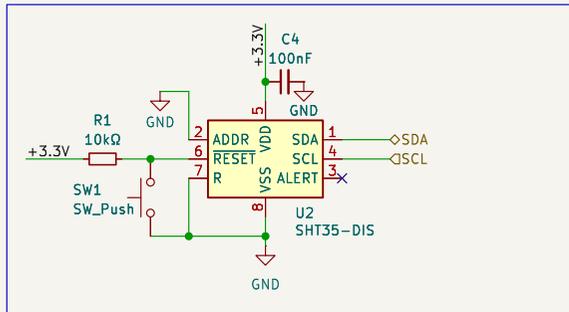
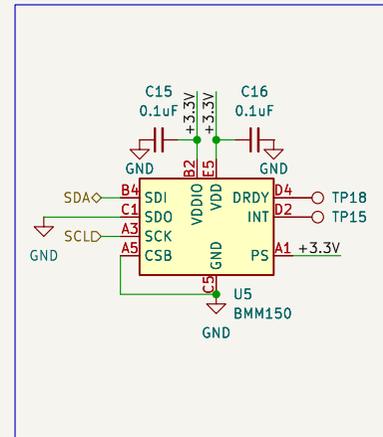
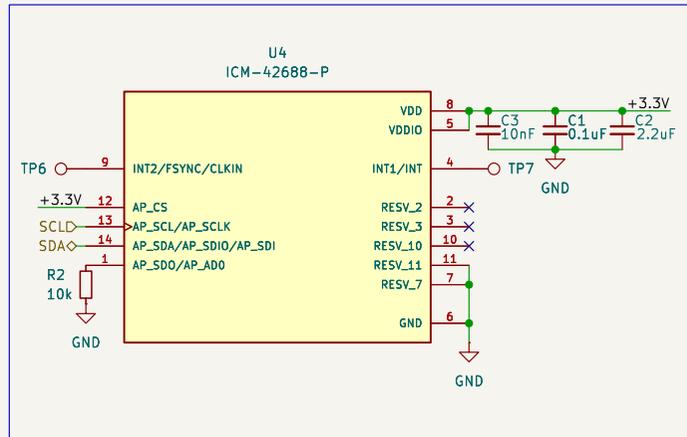
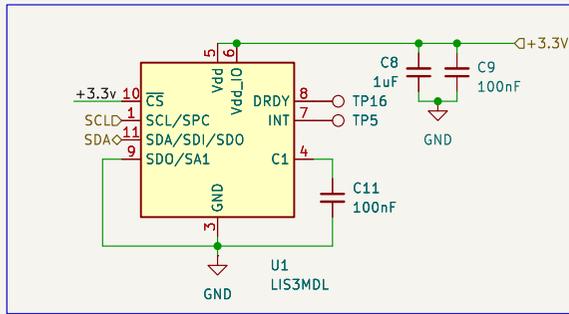
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KiCad E.D.A. 9.0.0

**Rev: V3.1**

Id: 3/13





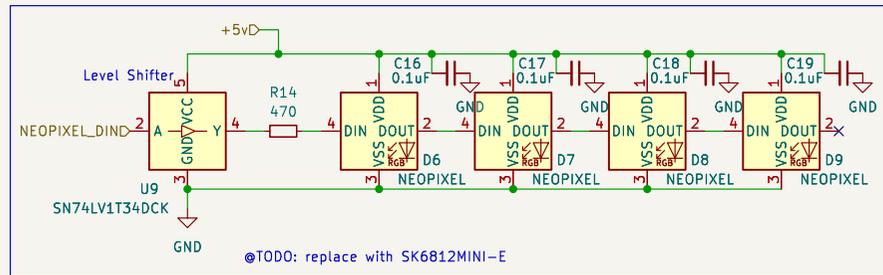
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**Title:**

Size: A4 Date:

KiCad E.D.A. 9.0.0 Rev:

Id: 5/13



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CM4-based ROV (robotics) control board.

// ATTEMPT THE IMPOSSIBLE  
// DO IT RIGHT, DO IT MUREX

**MUREX Robotics [Byran Huang]**

Sheet: /CM4\_GPIO/Neopixel/  
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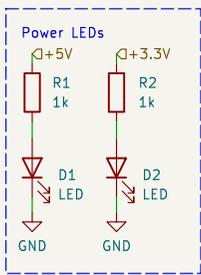
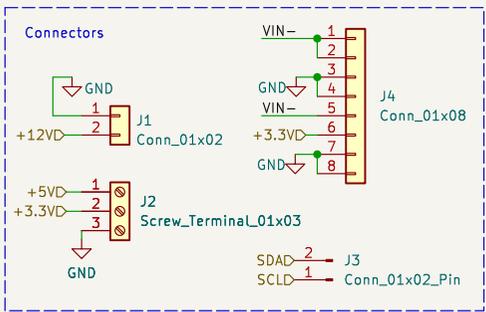
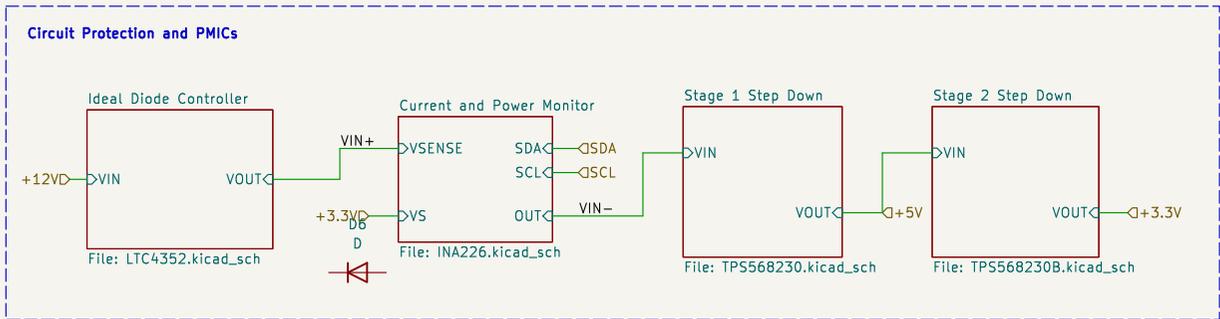
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Size: A4 Date: 2023-12-30

KiCad E.D.A. 9.0.0

**Rev: V3.1**

Id: 6/13



- H1 MountingHole
- H2 MountingHole

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.

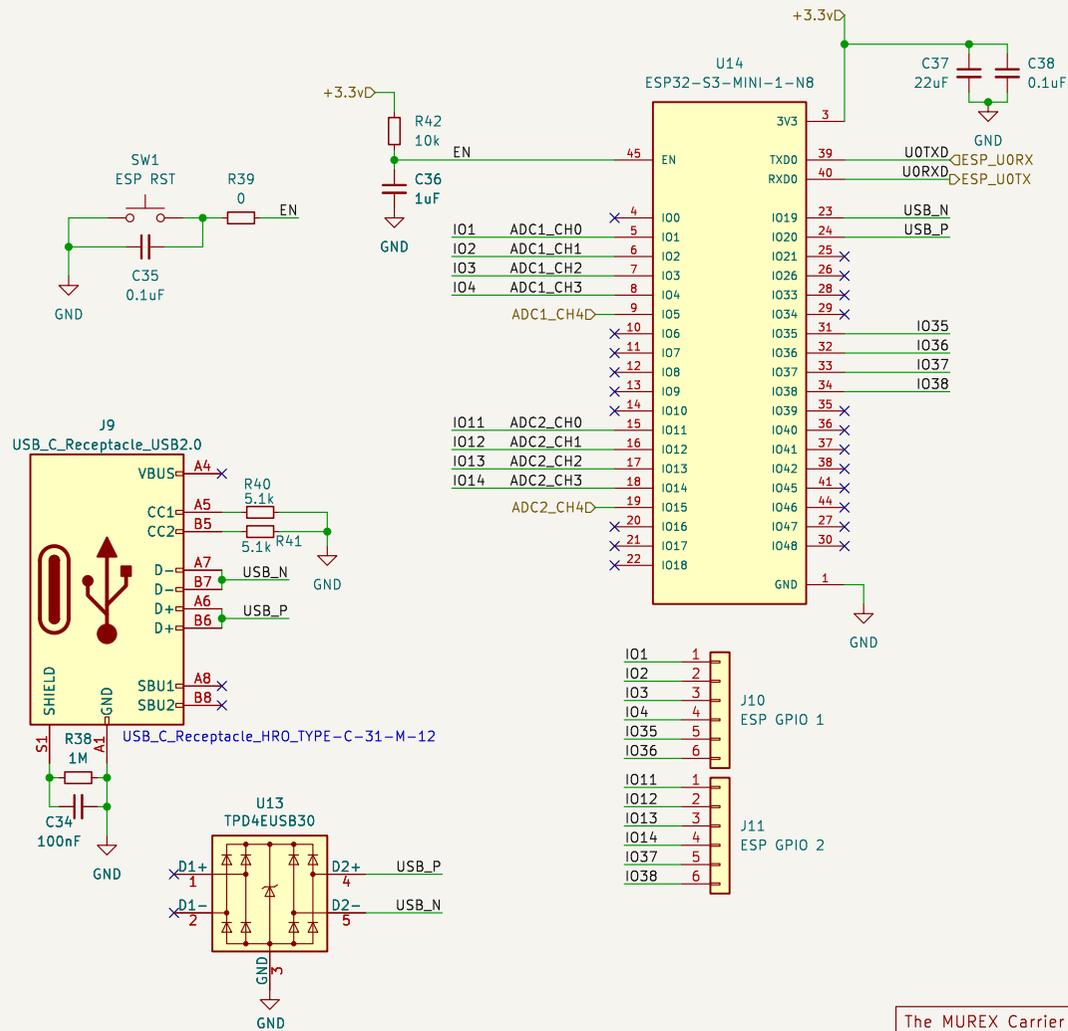
// THINK DIFFERENT, THINK MUREX.  
// INNOVATION IS OUR OBSESSION.

**MUREX Robotics [Max Liu]**

Sheet: /Power/  
File: power.kicad\_sch

**Title: Power Board**

Size: A4	Date: 2023-11-27	<b>Rev: V2.0</b>
KiCad E.D.A. 9.0.0		Id: 7/13



The MUREX Carrier Board is the world's first open-source CM4-based ROV (robotics) control board.

// ATTEMPT THE IMPOSSIBLE  
 // DO IT RIGHT, DO IT MUREX

**MUREX Robotics [Byran Huang]**

Sheet: /ESP32-S3/

File: esp32-s3.kicad\_sch

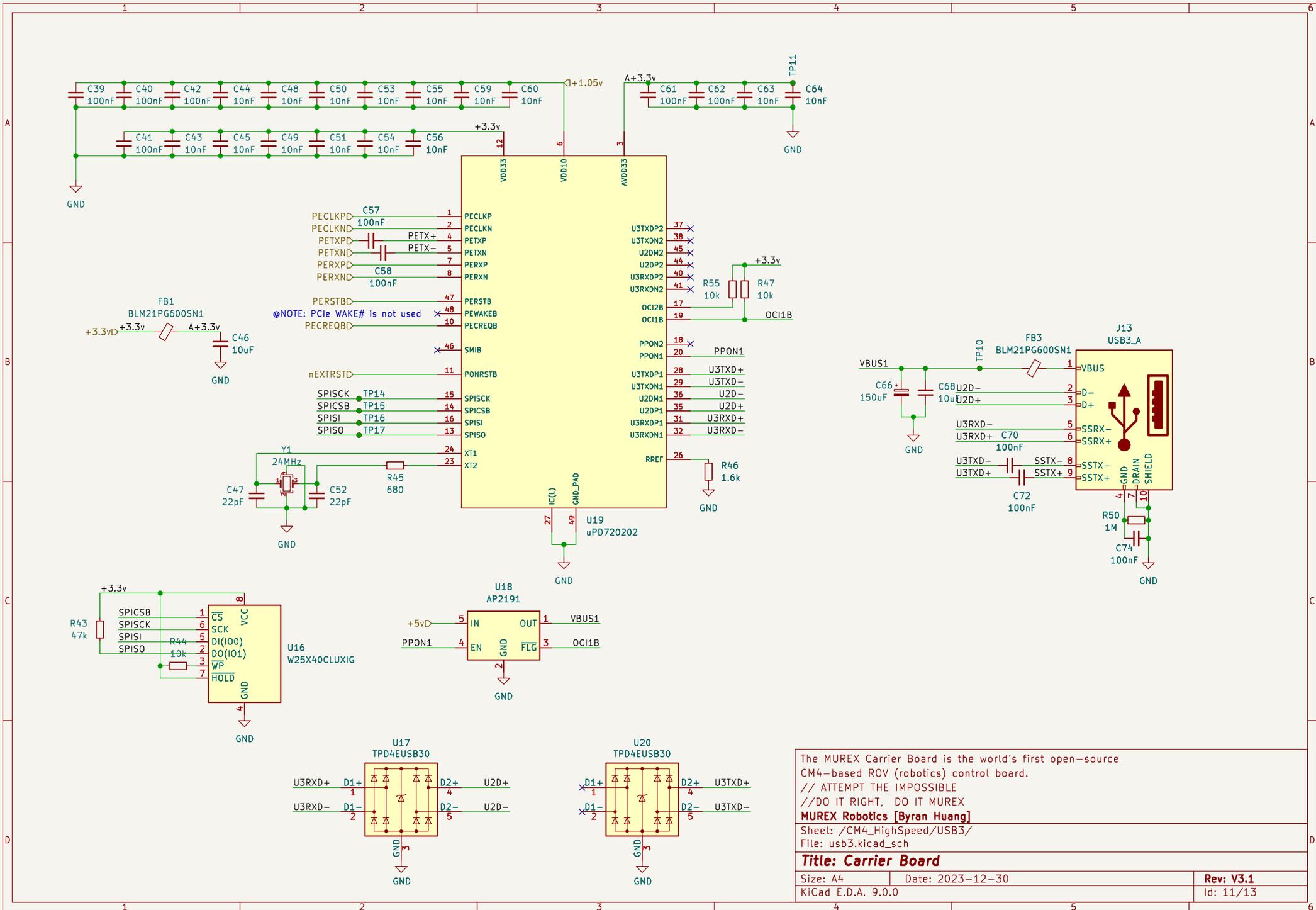
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Size: A4 Date: 2023-12-30

KiCad E.D.A. 9.0.0

**Rev: V3.1**

Id: 10/13



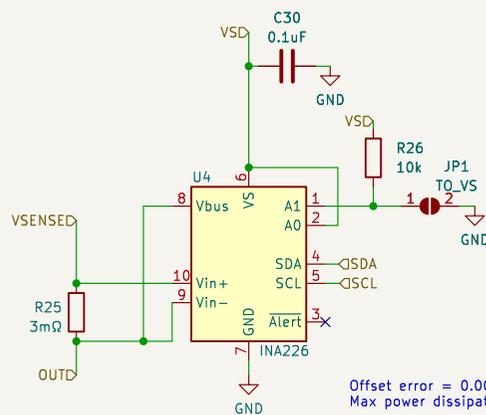
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 // ATTEMPT THE IMPOSSIBLE  
 // DO IT RIGHT, DO IT MUREX  
**MUREX Robotics [Byran Huang]**

Sheet: /CM4\_HighSpeed/USB3/  
 File: usb3.kicad\_sch

**Title: Carrier Board**

Size: A4	Date: 2023-12-30	Rev: V3.1
KiCad E.D.A. 9.0.0		Id: 11/13





Offset error =  $0.0025\text{mV} / (3\text{m}\Omega * 25\text{A}) = 0.003\%$   
 Max power dissipation =  $3\text{m}\Omega * (25\text{A})^2 = 1.875\text{W}$

Default Address: 0x45 | 0b1000101  
 A1 -> GND: 0x41 | 0b1000001

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// THINK DIFFERENT, THINK MUREX.

// INNOVATION IS OUR OBSESSION.

**MUREX Robotics [Max Liu]**

Sheet: /Power/Current and Power Monitor/

File: INA226.kicad\_sch

**Title: Power Board**

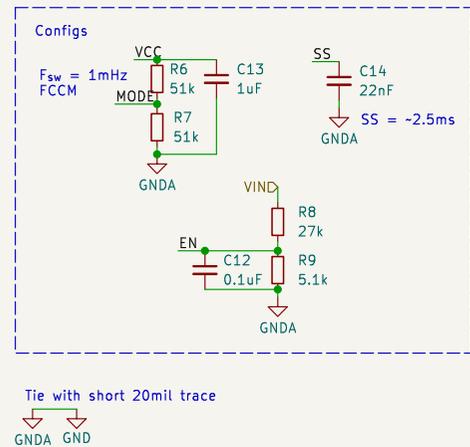
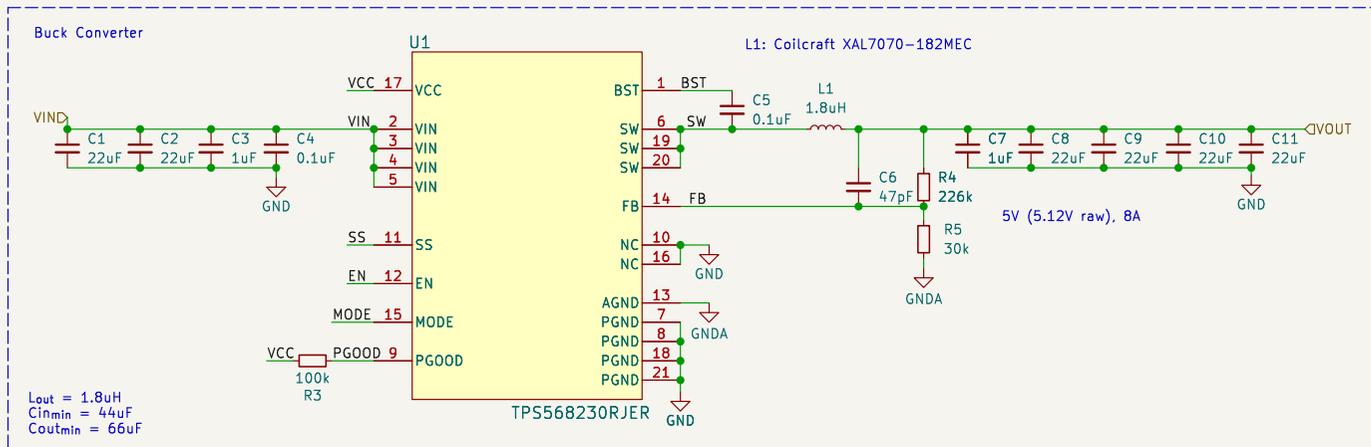
Size: A4

Date: 2023-11-27

Rev: V2.0

KiCad E.D.A. 9.0.0

Id: 11/13



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.

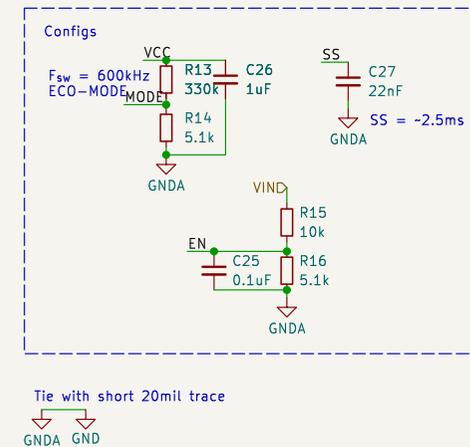
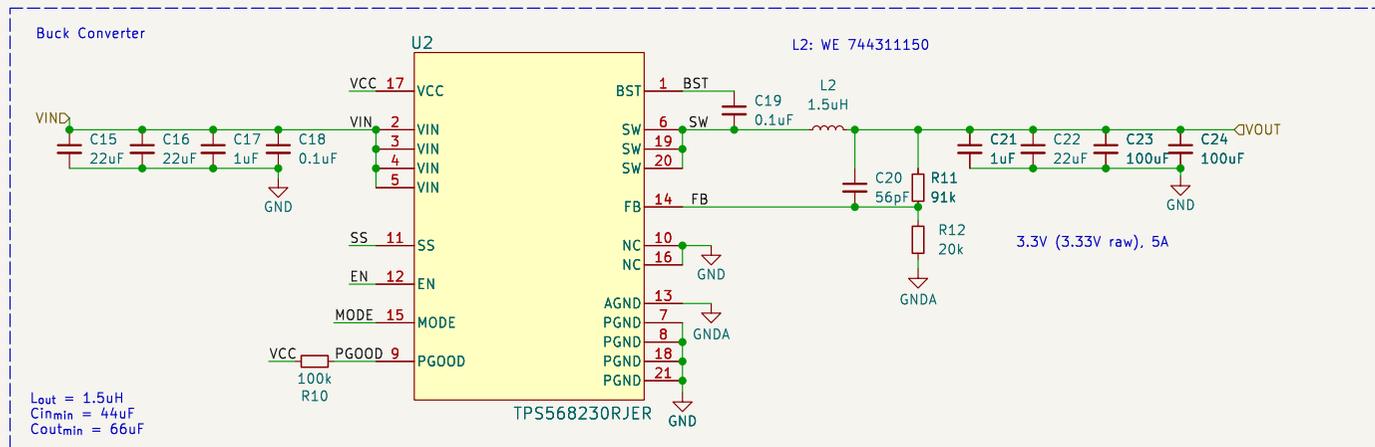
// THINK DIFFERENT, THINK MUREX.  
 // INNOVATION IS OUR OBSESSION.

**MUREX Robotics [Max Liu]**

Sheet: /Power/Stage 1 Step Down/  
 File: TPS568230.kicad\_sch

**Title: Power Board**

Size: A4	Date: 2023-11-27	Rev: V2.0
KiCad E.D.A. 9.0.0		Id: 12/13



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: /Power/Stage 2 Step Down/  
 File: TPS568230B.kicad\_sch

**Title: Power Board**

Size: A4	Date: 2023-11-27	Rev: V2.0
KiCad E.D.A. 9.0.0		Id: 13/13