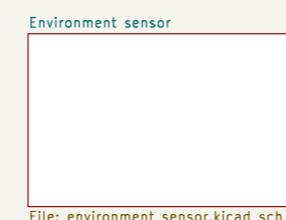
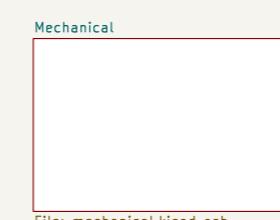
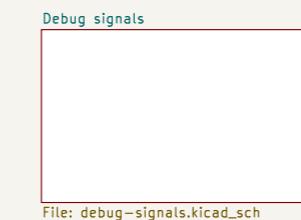
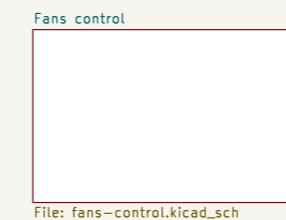
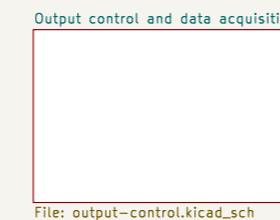
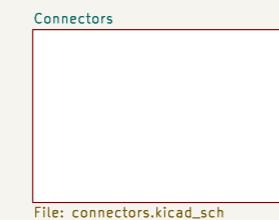
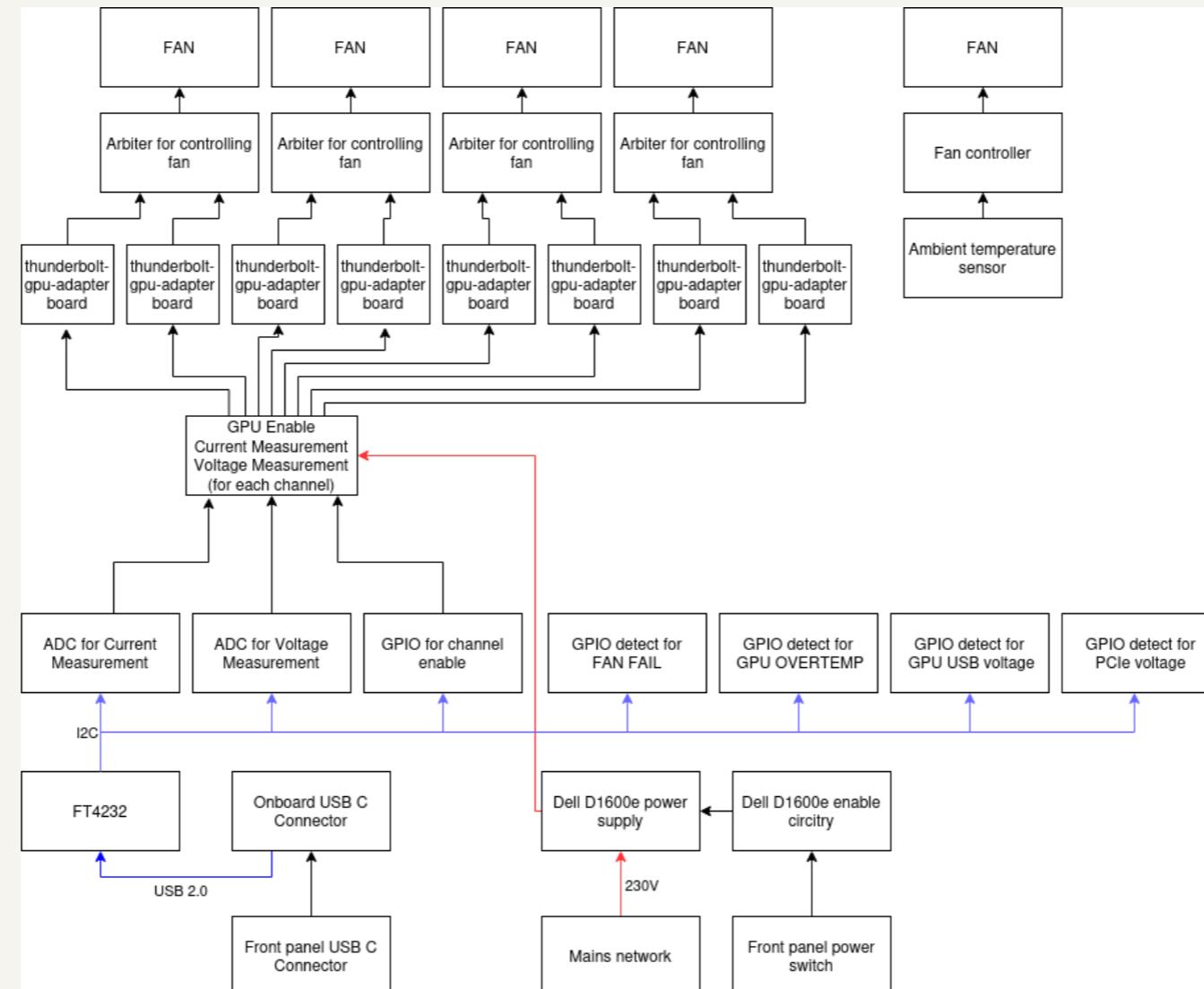


## GPU Cluster Backplane



www.antmicro.com  
**Antmicro Ltd**

Sheet: / File: gpu-cluster-backplane.kicad\_sch

**Title: GPU Cluster Backplane**

Size: A3 Date: 2024-07-10  
KiCad E.D.A. kicad-cli 7.0.11

Rev: 1.1.0:ffd87  
Id: 1/16

A

A

B

B

C

C

D

D

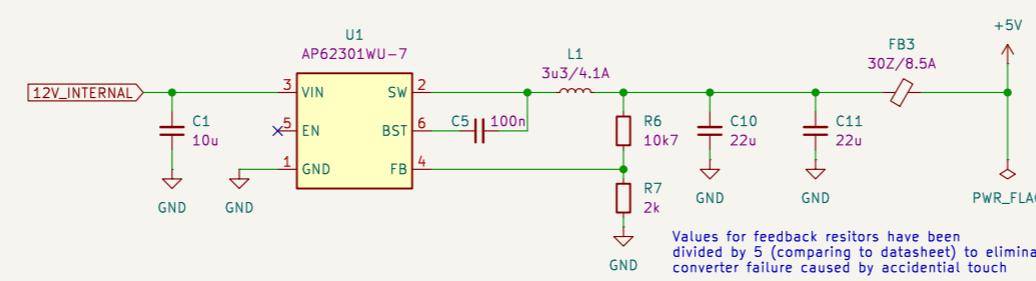
E

E

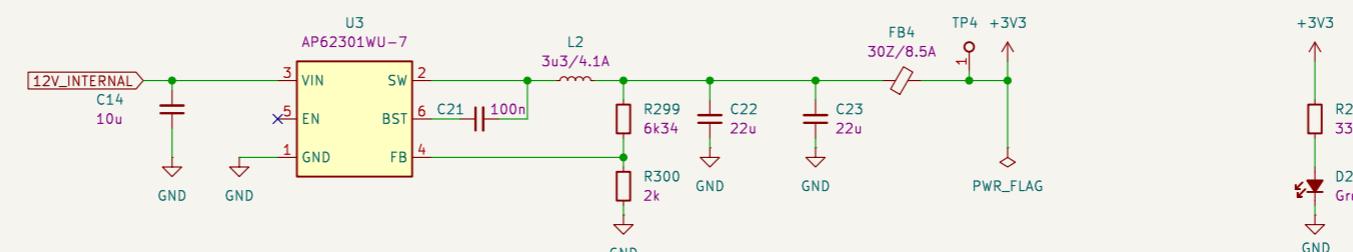
F

F

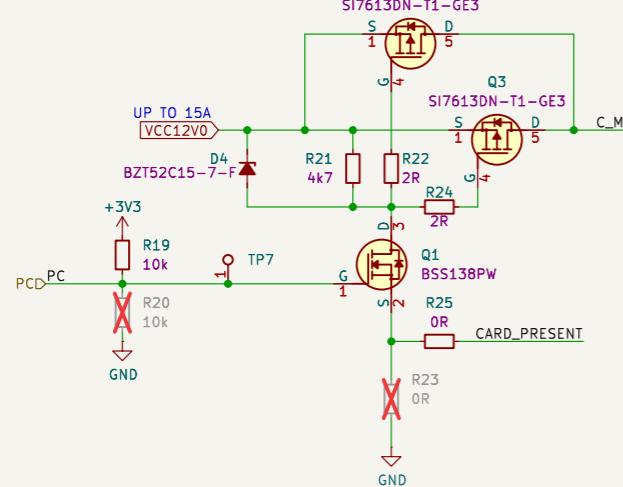
## 5V0 DC/DC Converter



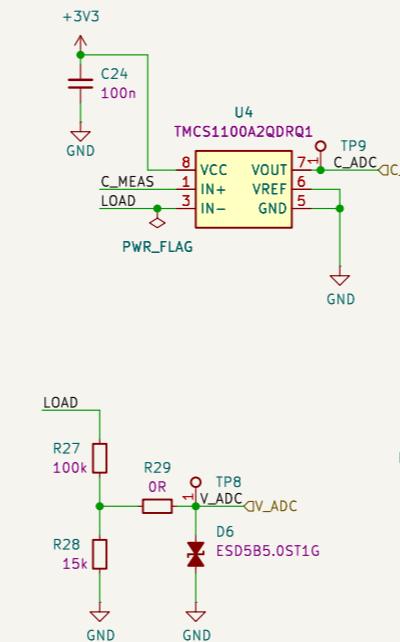
## 3V3 DC/DC Converter



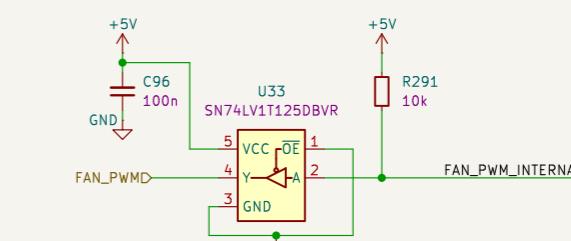
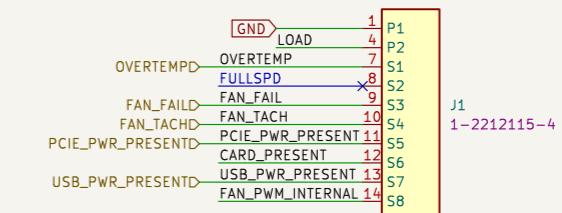
## Channel high side switch

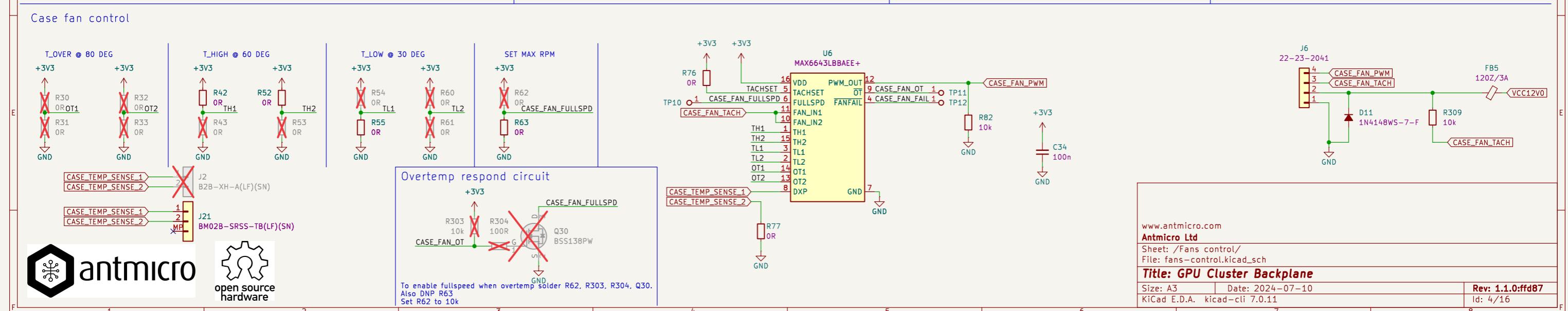
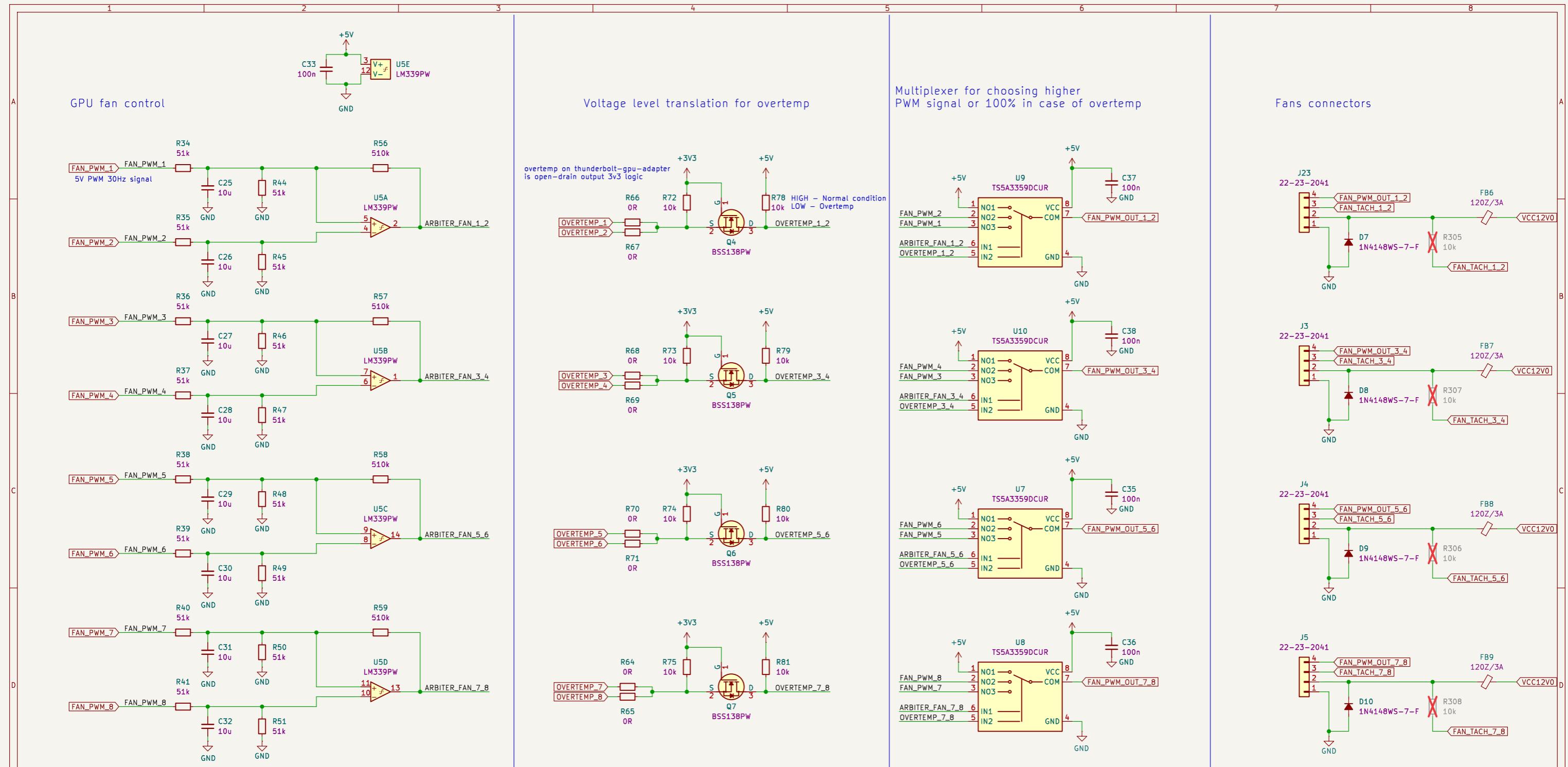


## Current and voltage measurement



## GPU Adapter connector





open source  
hardware

A

B

C

D

E

F

A

B

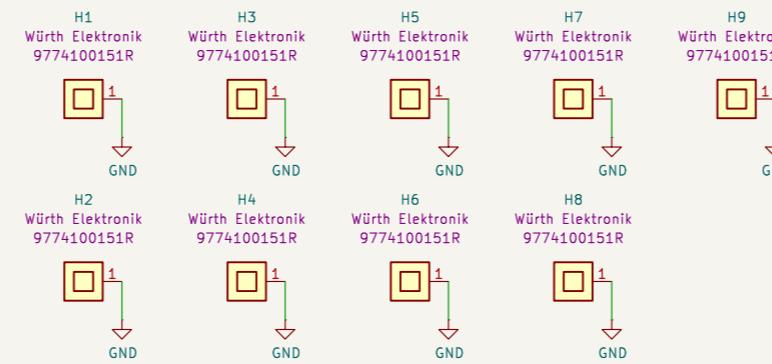
C

D

E

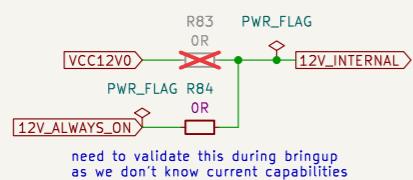
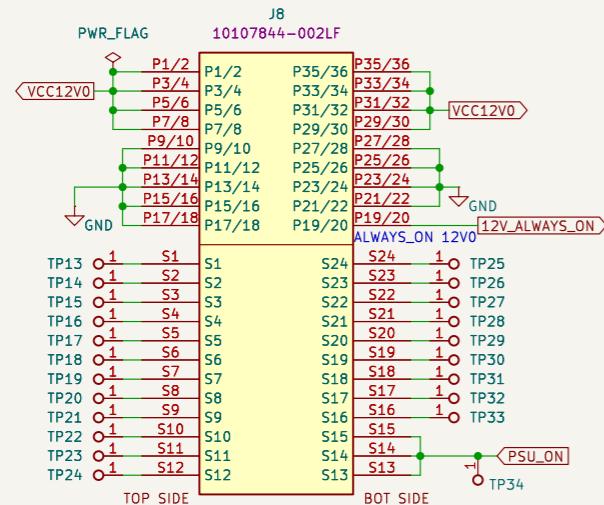
F

## Holes for studs



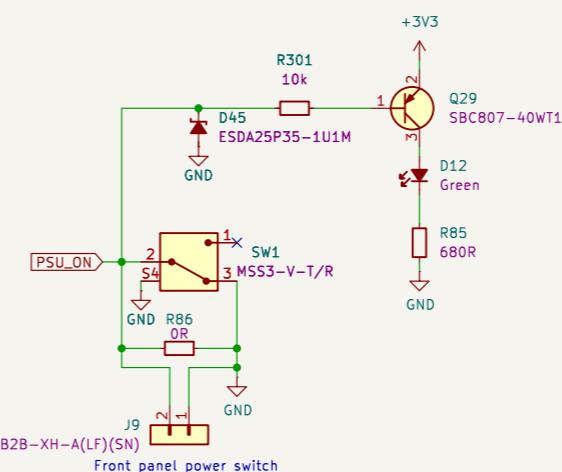
A

## Dell D1600e PSU connector



F

## Power switch connector



1

2

3

4

5

6

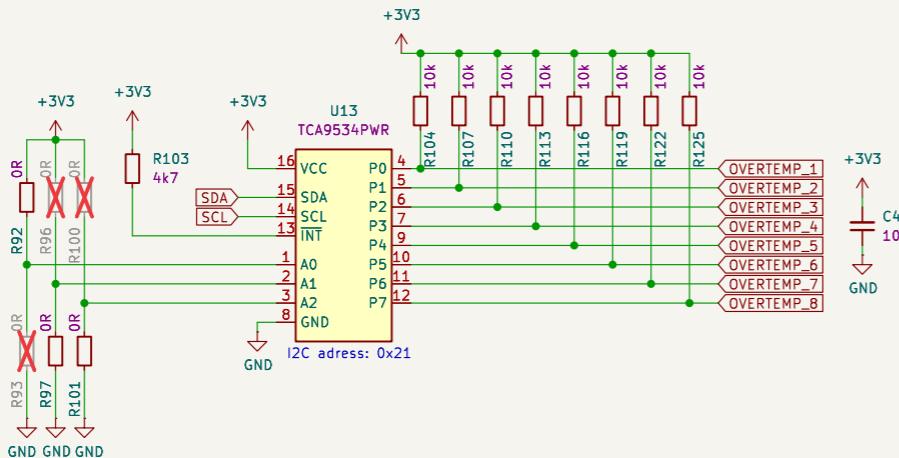
7

8

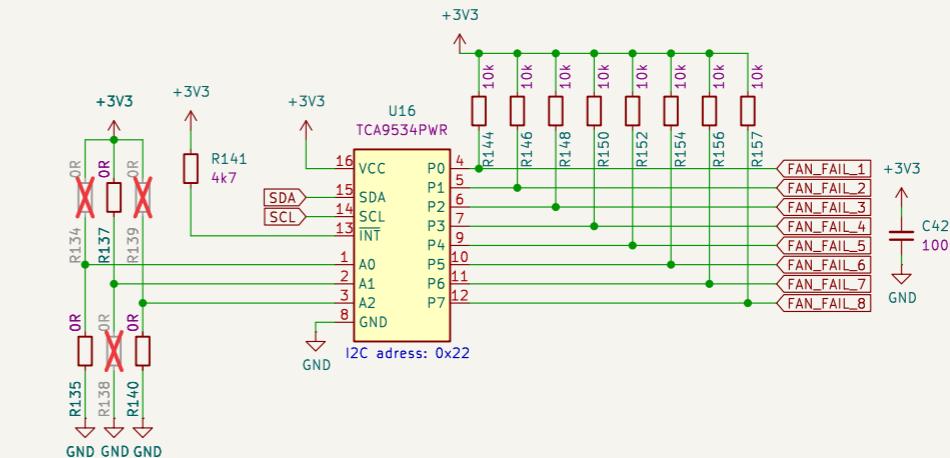
F

1 2 3 4 5 6 7 8

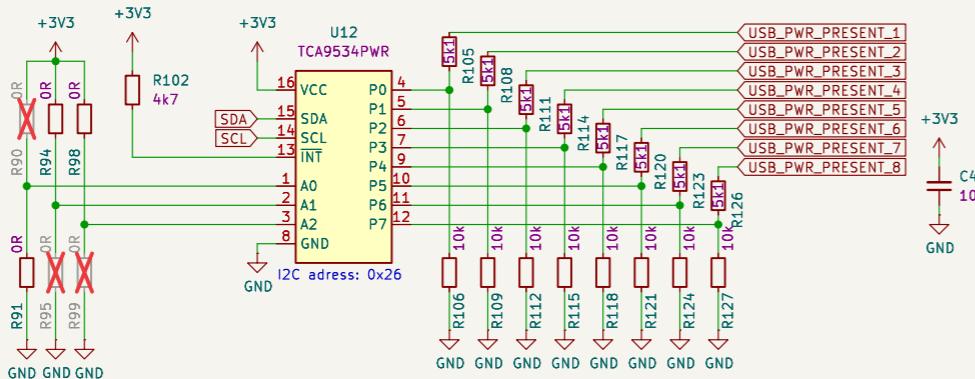
GPIO EXPANDER for OVERTEMP



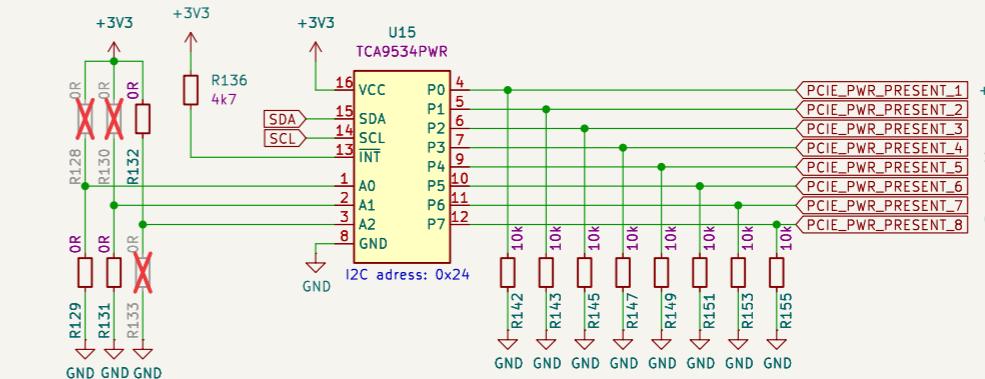
GPIO EXPANDER for FAN\_FAIL



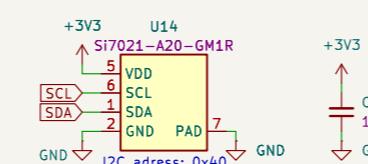
GPIO EXPANDER for USB\_PWR\_PRESENT



GPIO EXPANDER for PCIE\_PWR\_PRESENT



Temperature and humidity sensor



[www.antmicro.com](http://www.antmicro.com)

Antmicro Ltd

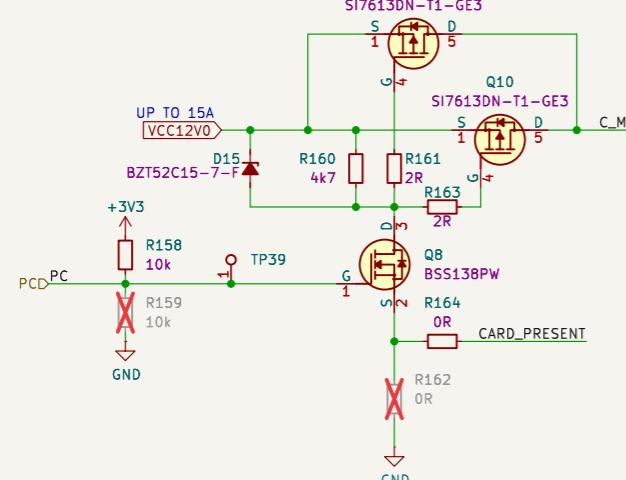
Sheet: /Debug signals/  
File: debug-signals.kicad\_sch

Title: GPU Cluster Backplane

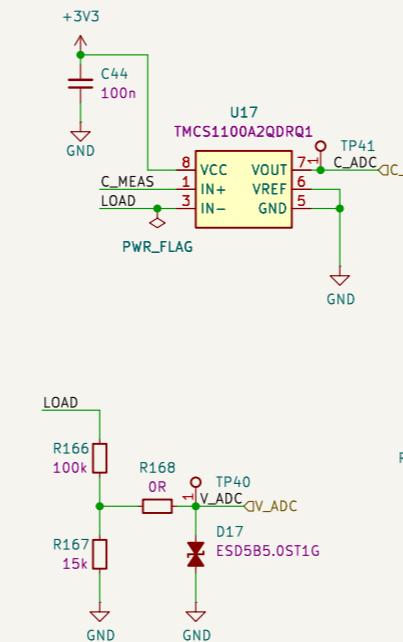
Size: A3 Date: 2024-07-10  
KiCad E.D.A. kicad-cl 7.0.11

Rev: 1.1.0:ffd87  
Id: 8/16

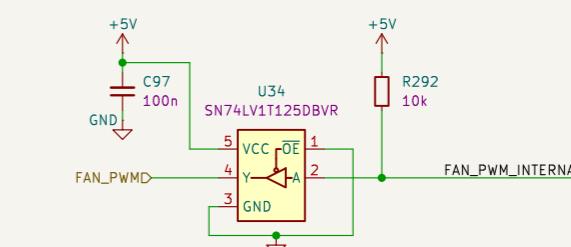
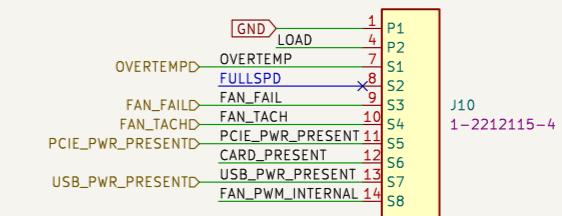
## Channel high side switch



## Current and voltage measurement



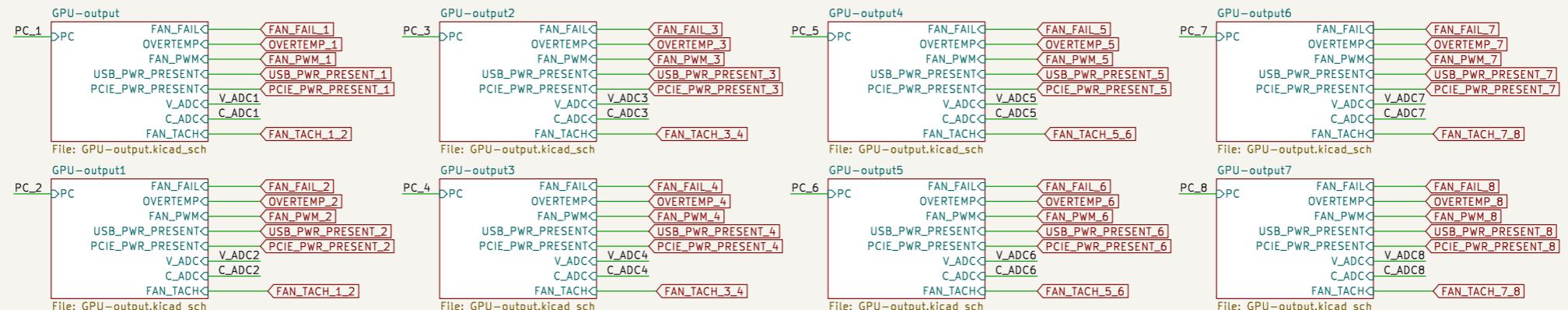
## GPU Adapter connector



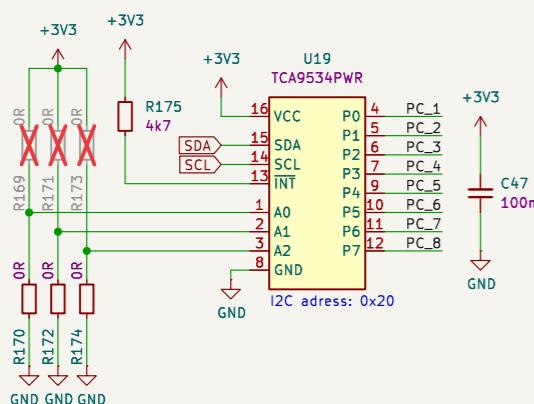
1 2 3 4 5 6 7 8

A

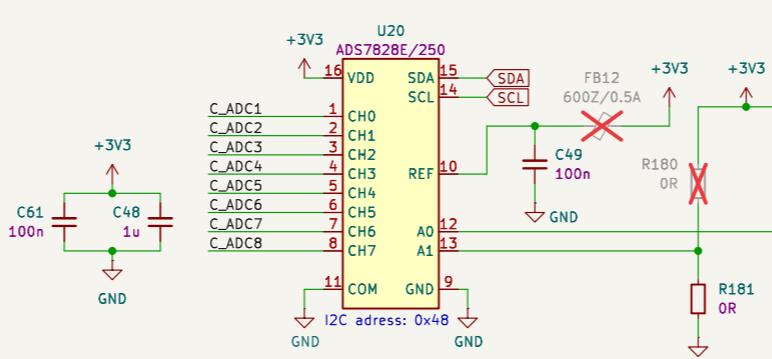
### Individual channels for connecting thunderbolt-gpu-adapters



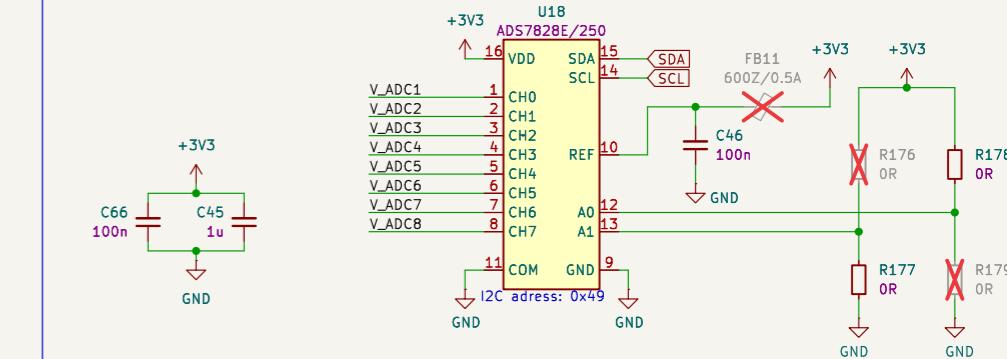
### GPIO EXPANDER for power cycling



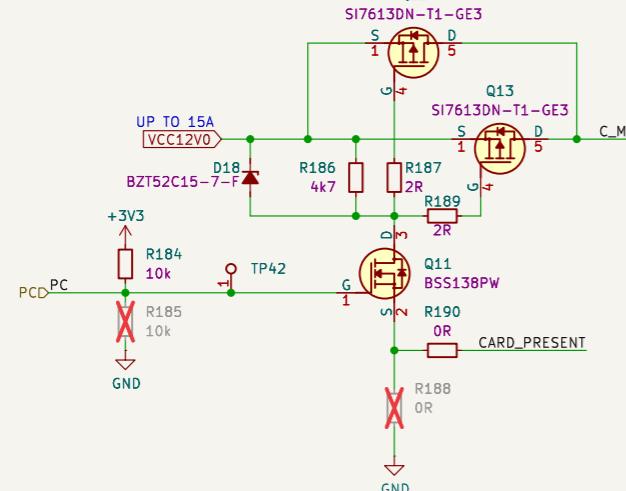
### ADC for current measurement



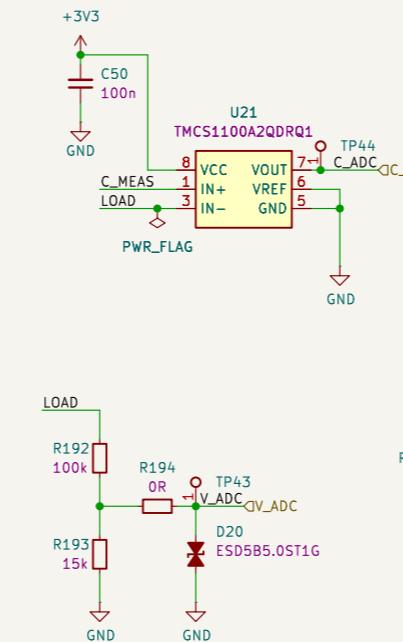
### ADC for voltage measurement



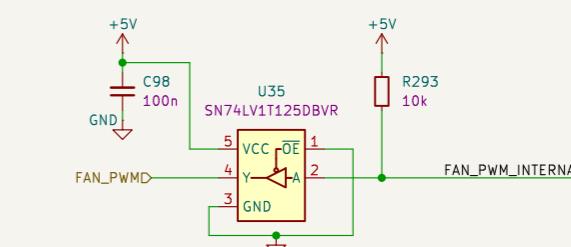
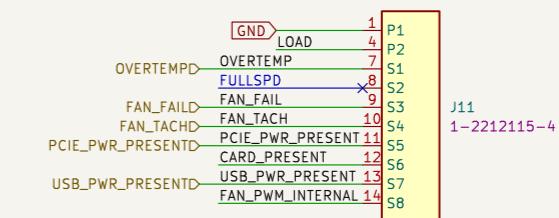
## Channel high side switch



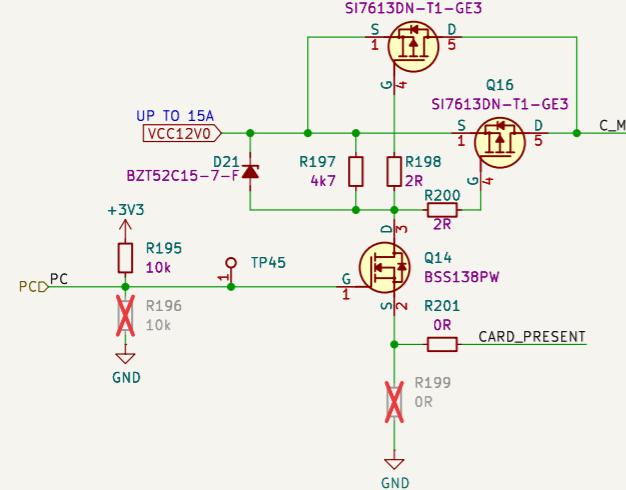
## Current and voltage measurement



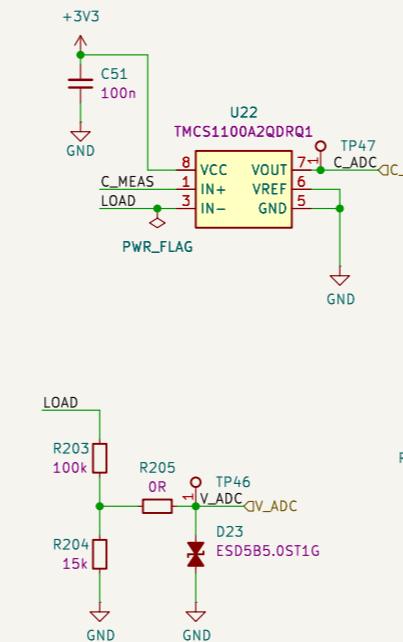
## GPU Adapter connector



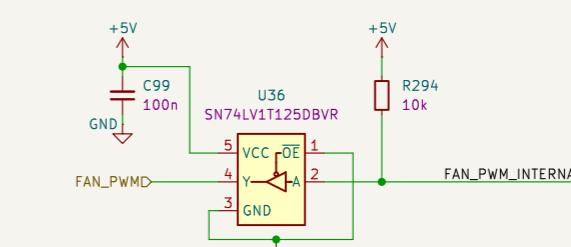
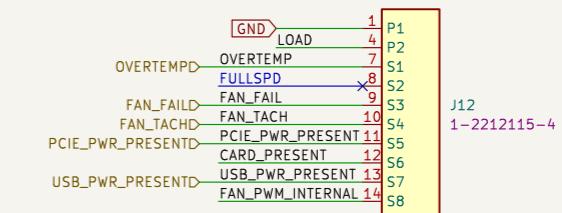
## Channel high side switch



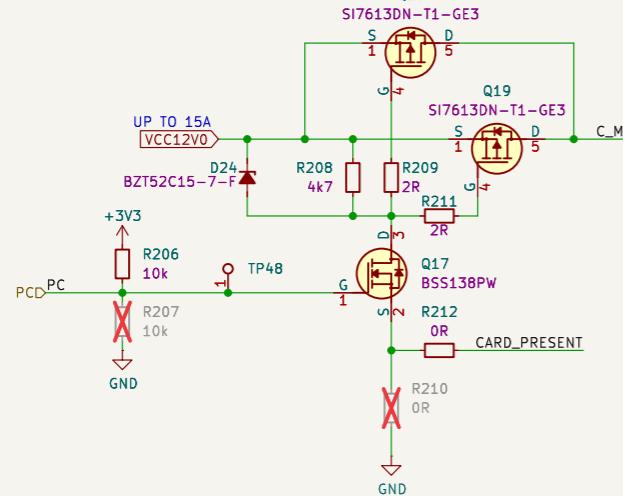
## Current and voltage measurement



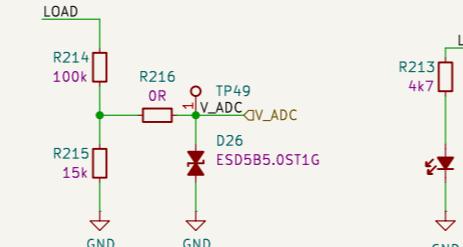
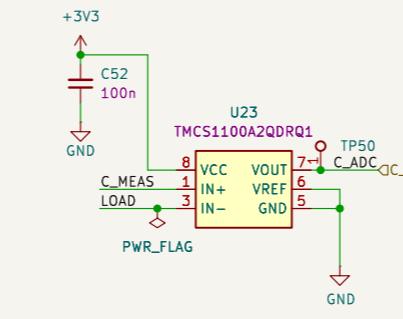
## GPU Adapter connector



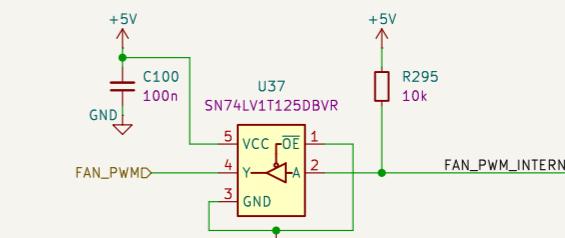
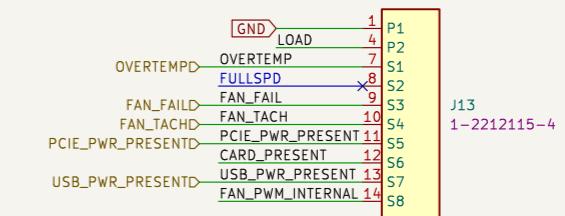
## Channel high side switch



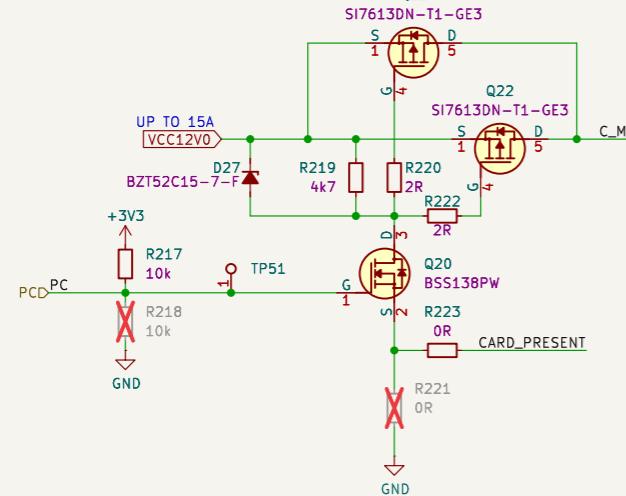
## Current and voltage measurement



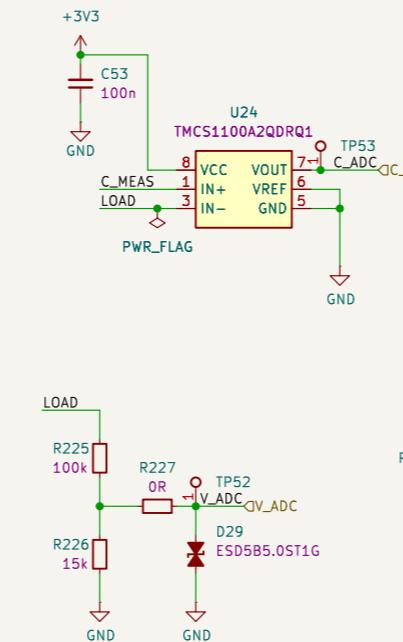
## GPU Adapter connector



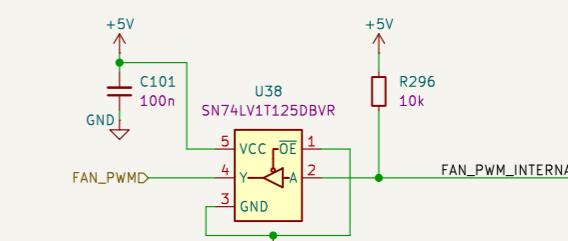
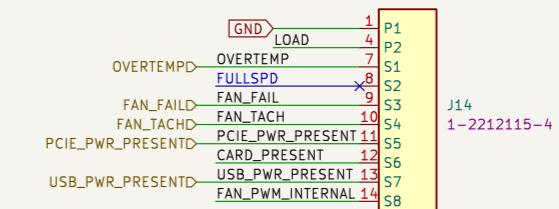
## Channel high side switch



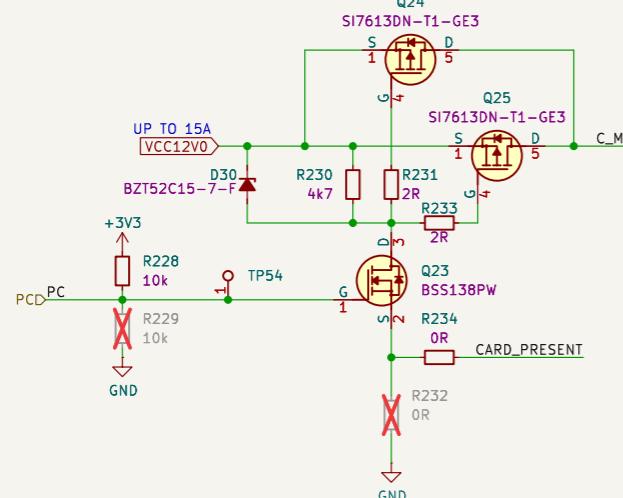
## Current and voltage measurement



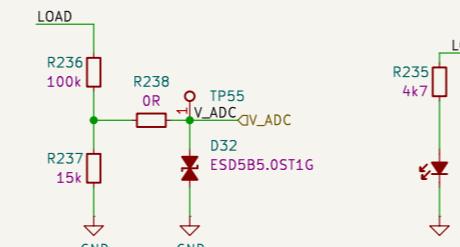
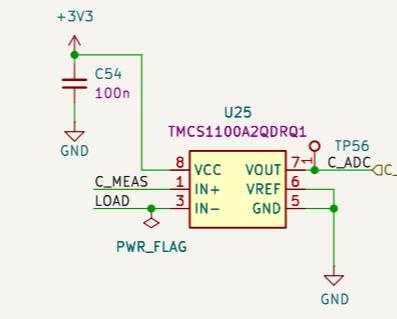
## GPU Adapter connector



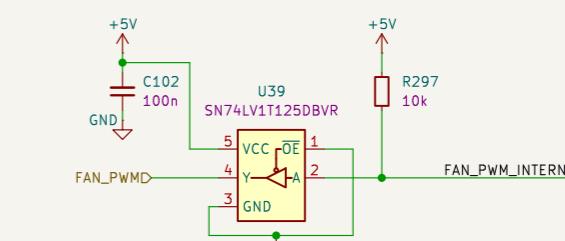
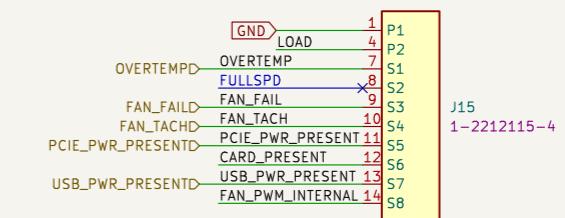
## Channel high side switch

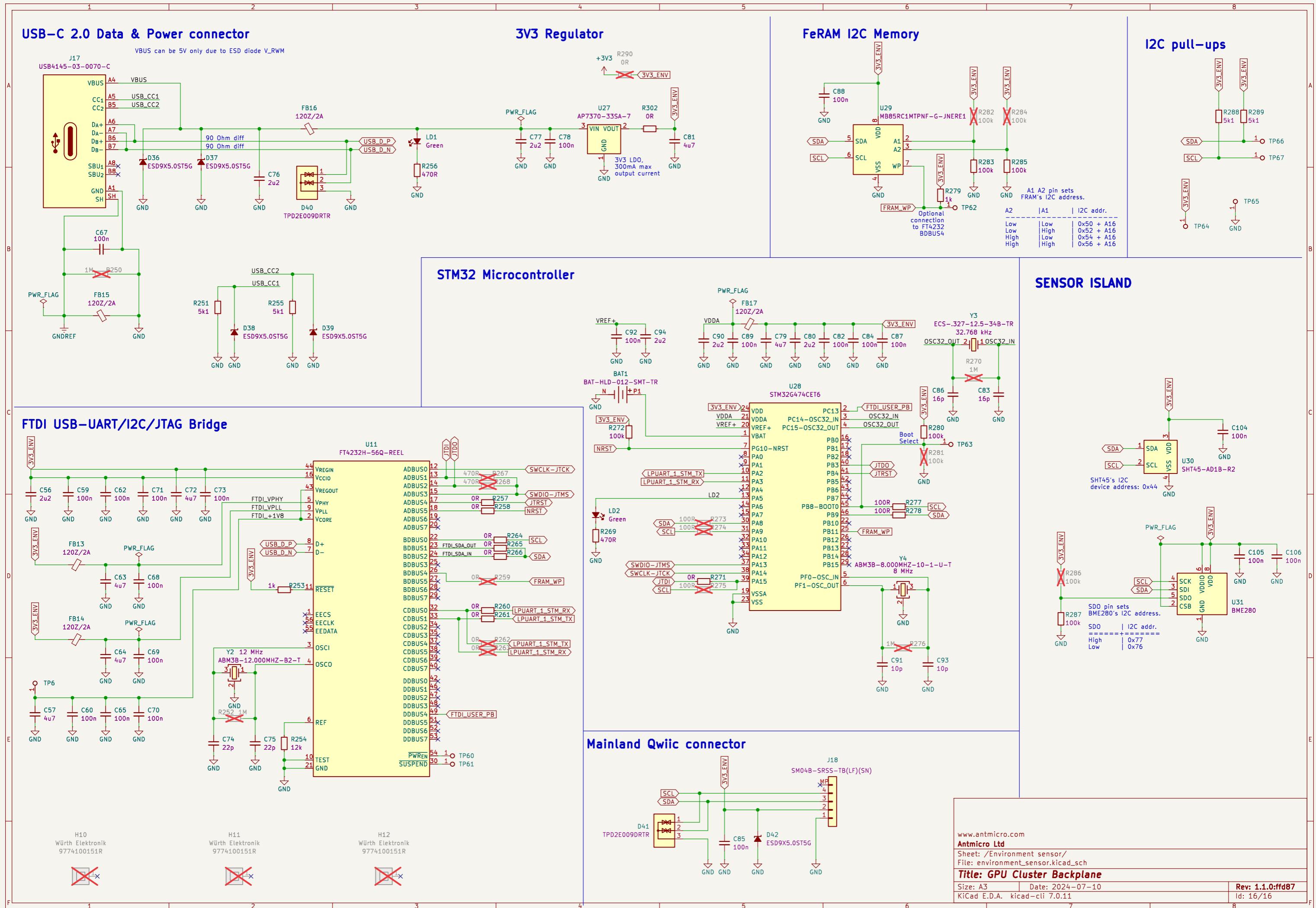


## Current and voltage measurement

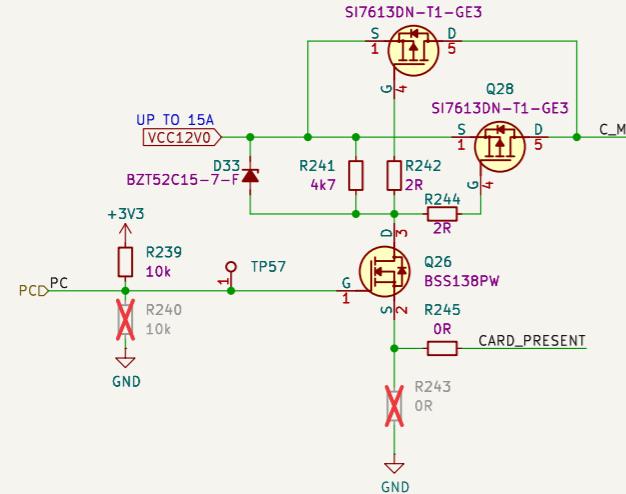


## GPU Adapter connector

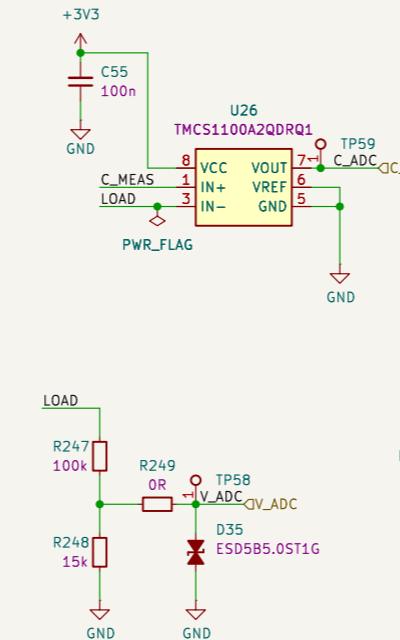




## Channel high side switch



## Current and voltage measurement



## GPU Adapter connector

