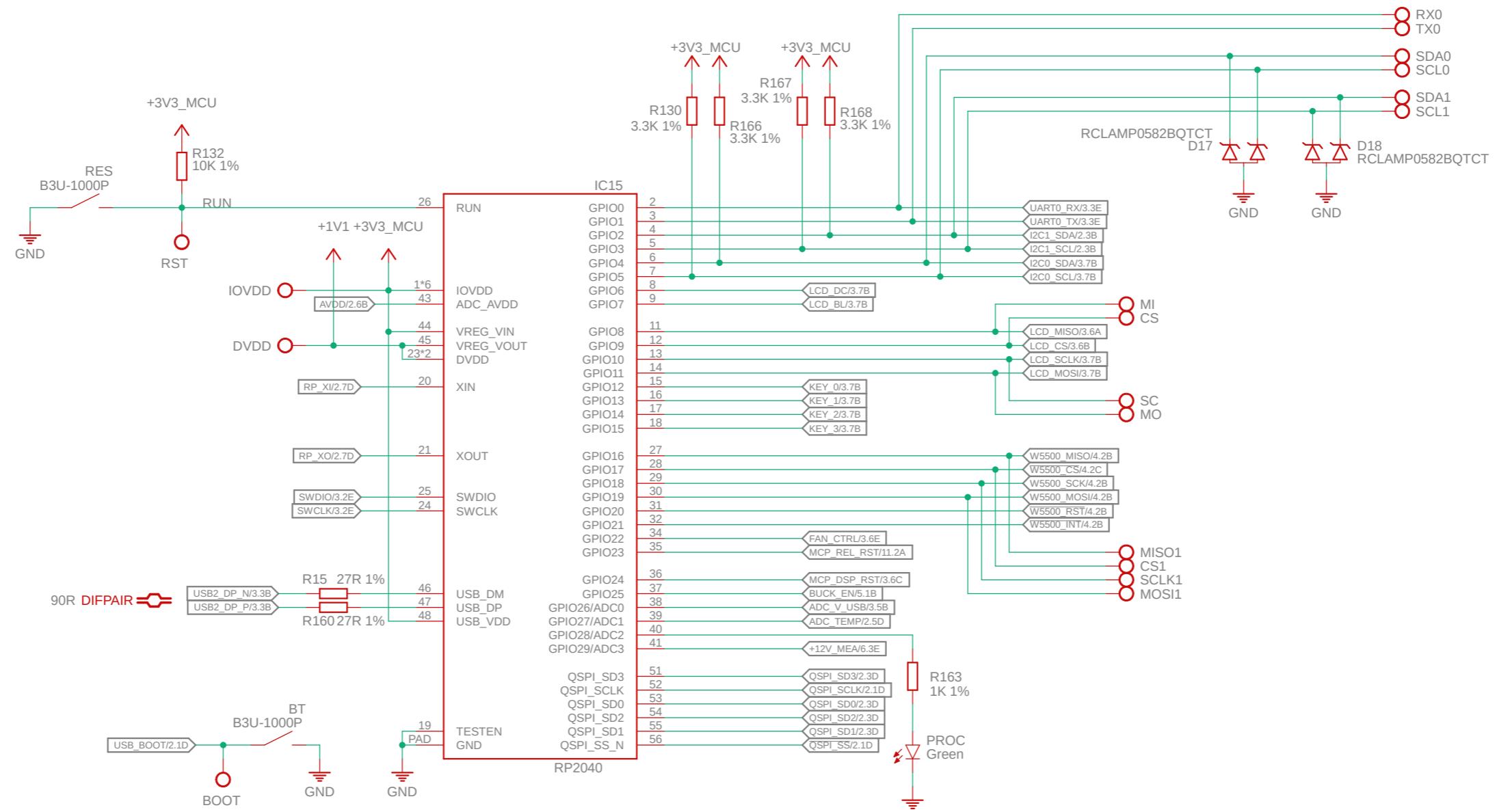
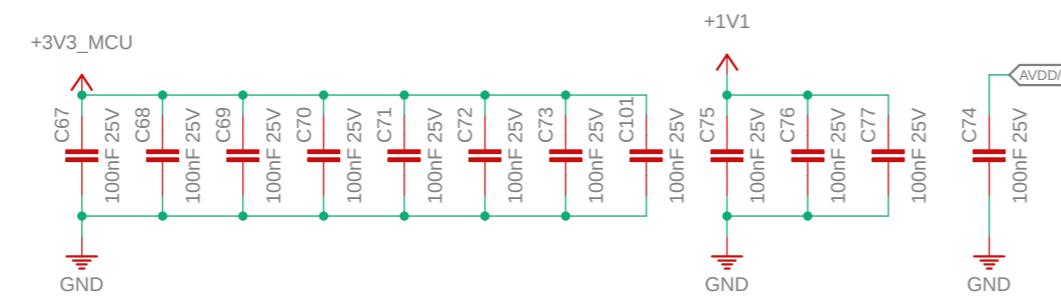


1 2 3 4 5 6 7 8

# RP2040 MCU



## DECOUPLING



## MAIN BOARD

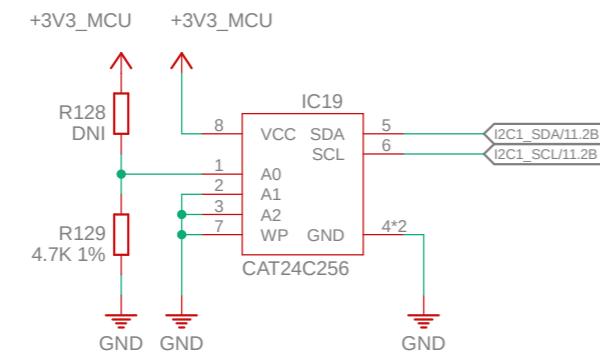
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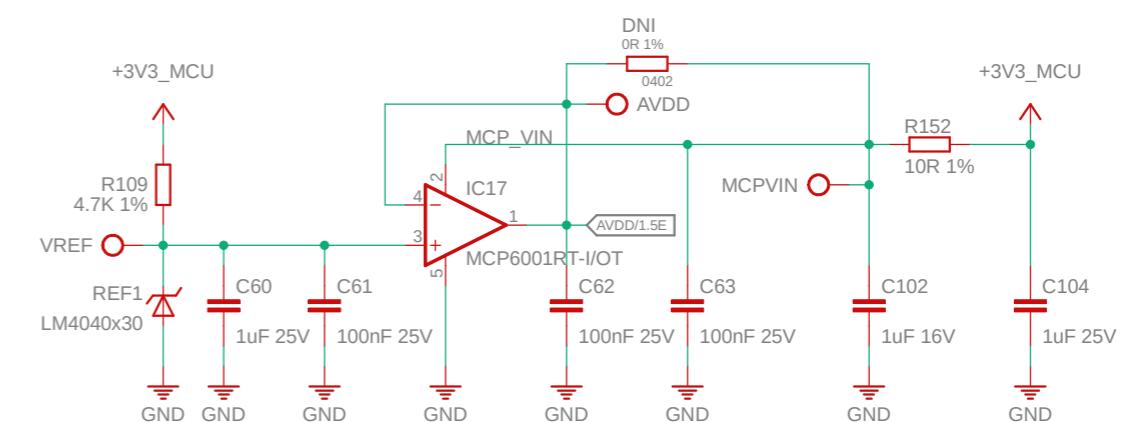
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# PERIPHERALS

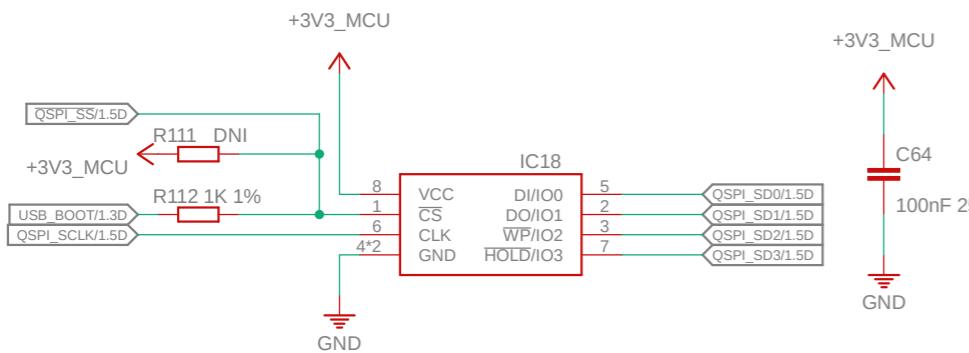
## USER MEMORY



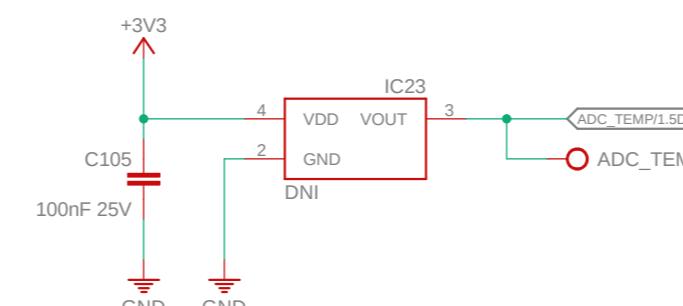
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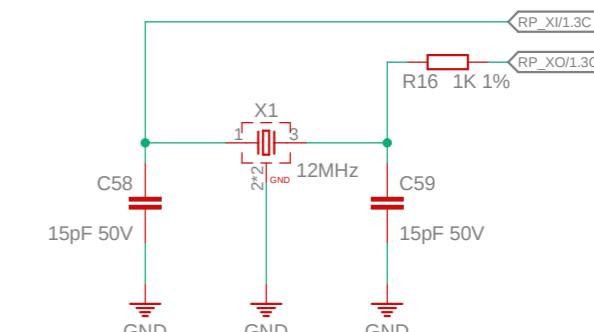
## RP2040 FLASH



## TEMPERATURE SENSOR



## 12MHZ CRYSTAL



MAIN BOARD

1.1.0

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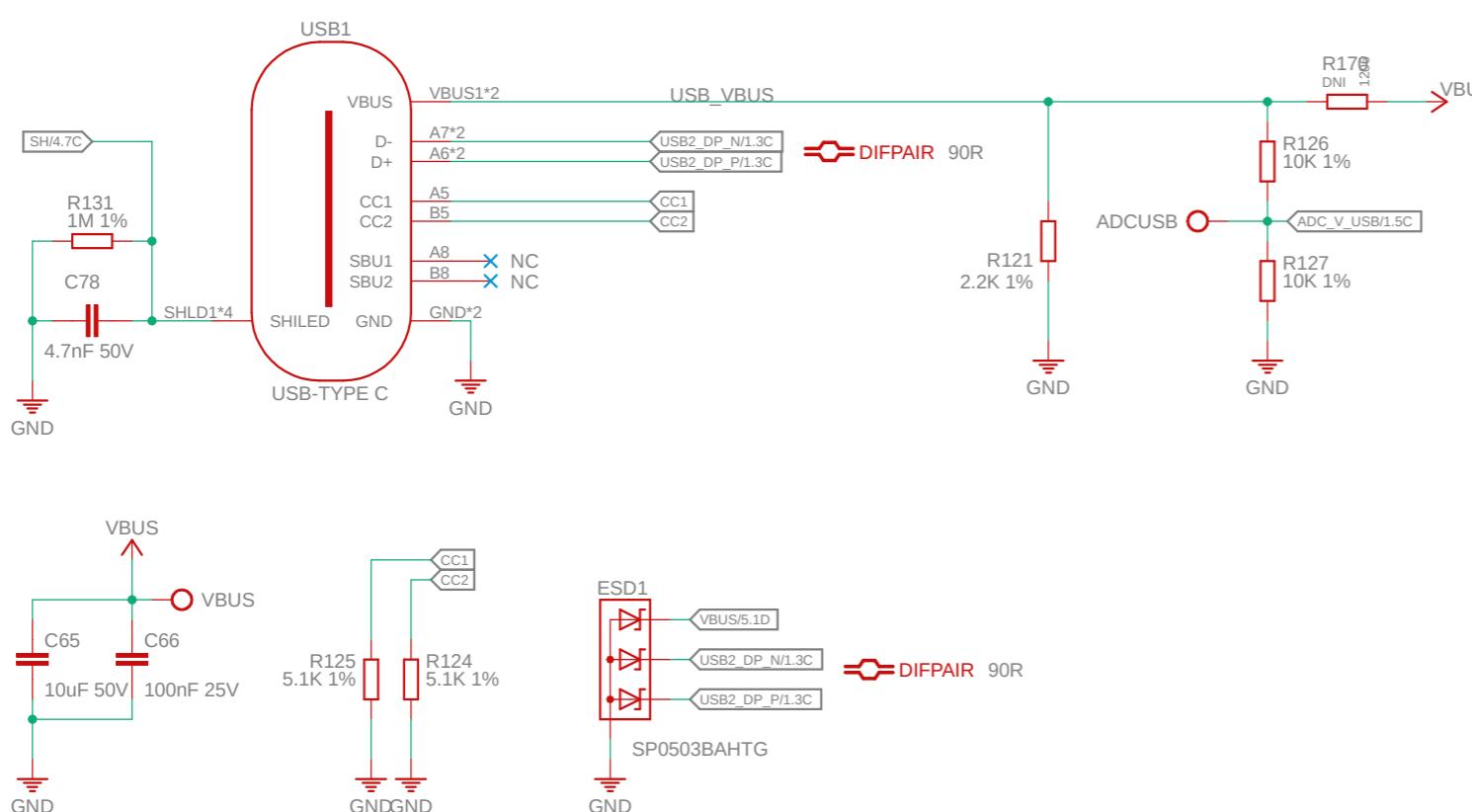
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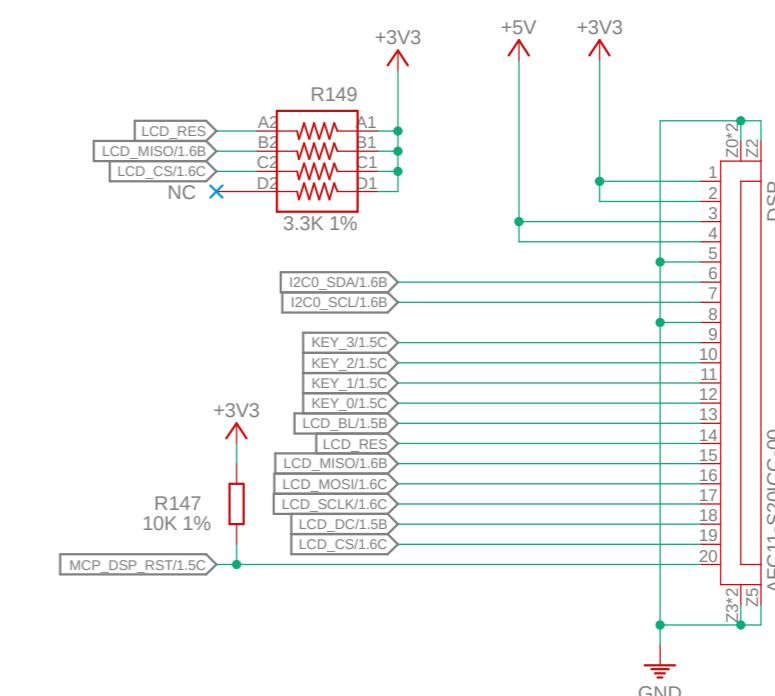
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1 2 3 4 5 6 7 8

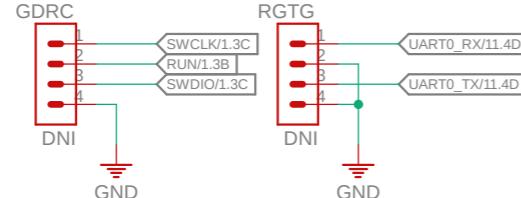
## USB-C CONNECTOR



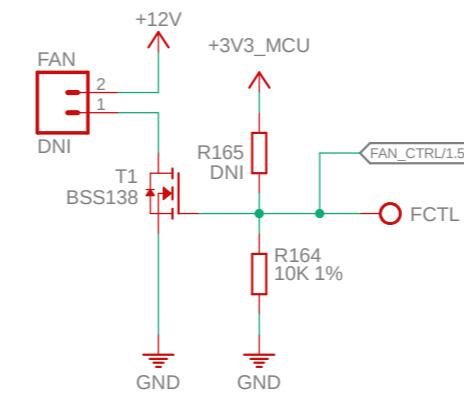
## BOARD CONNECTOR



## DEBUG CONNECTOR



## FAN CONNECTOR

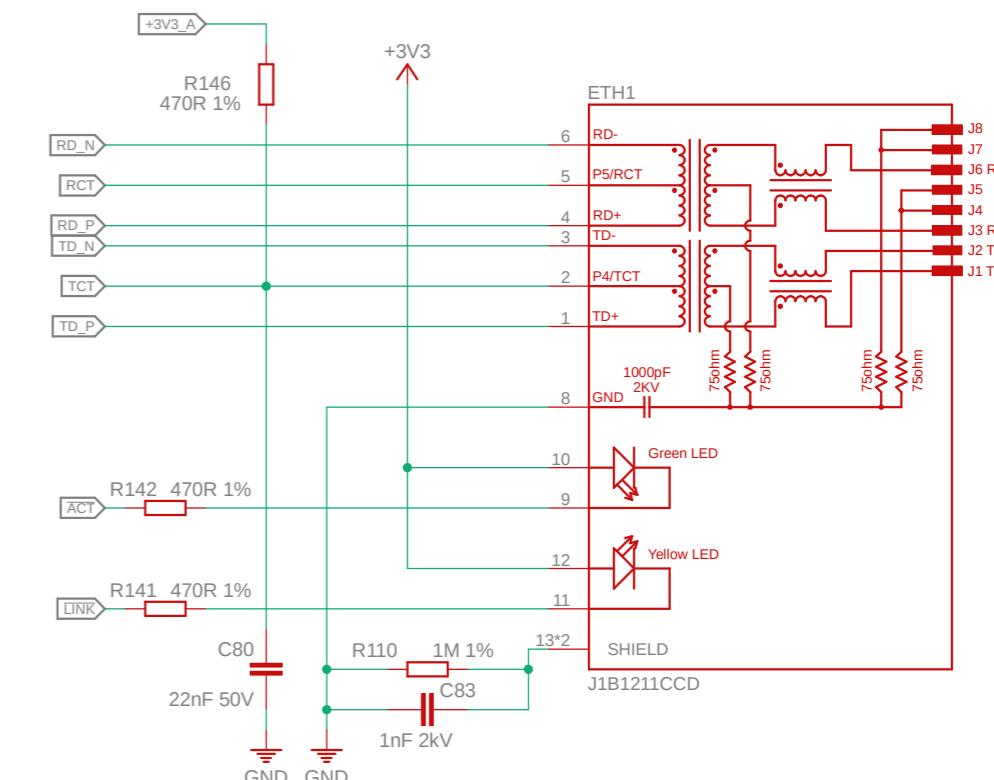
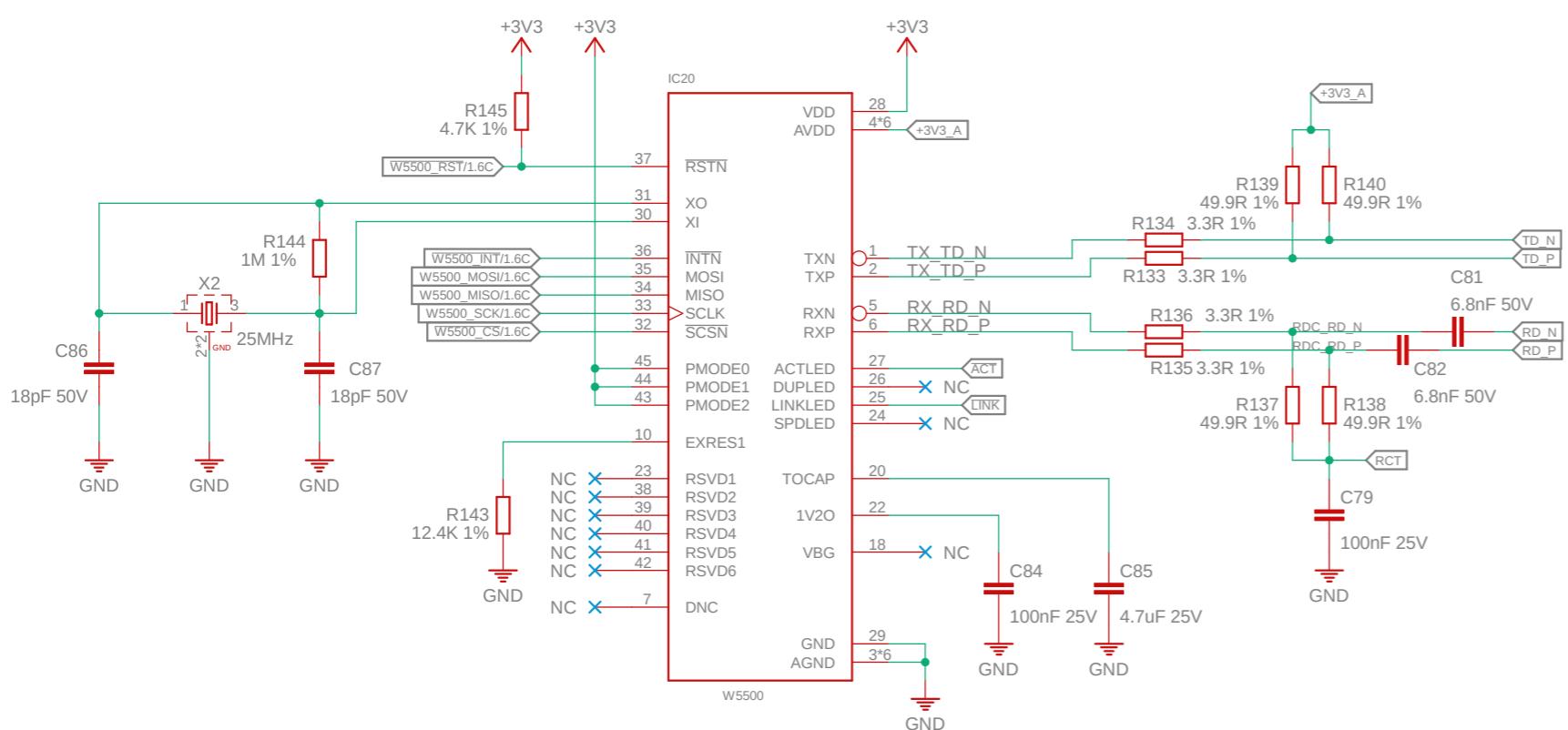


MAIN BOARD	
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Sheet: 3/11	
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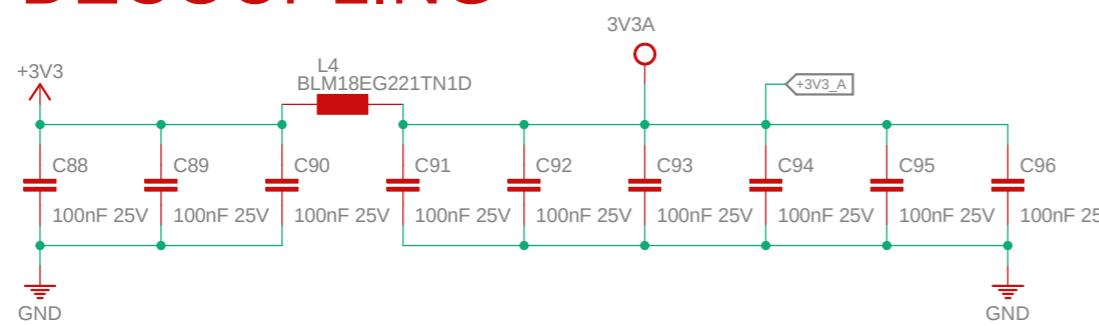
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# W5500 ETHERNET CONTROLLER

RJ45-CAT5



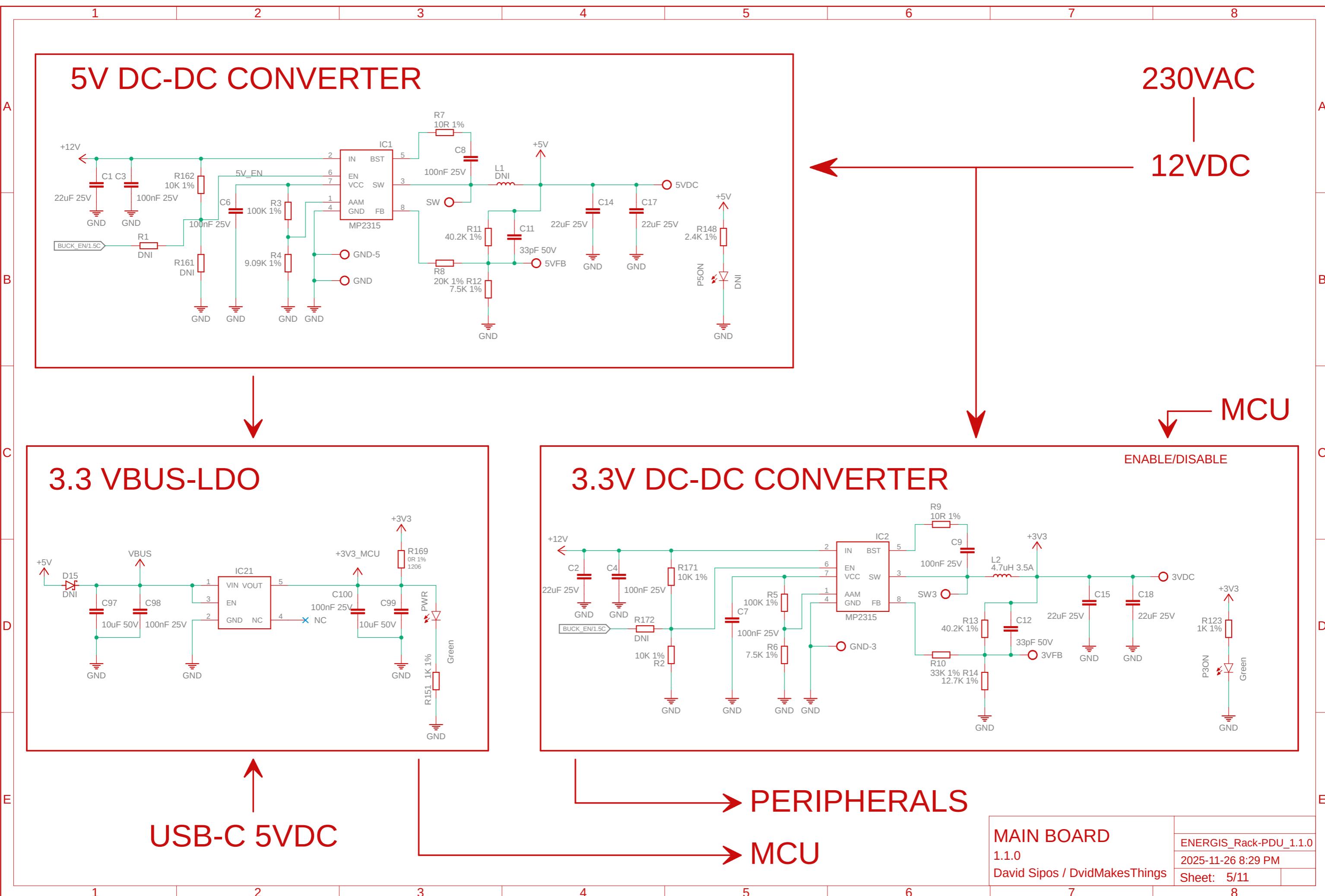
## DECOUPLING

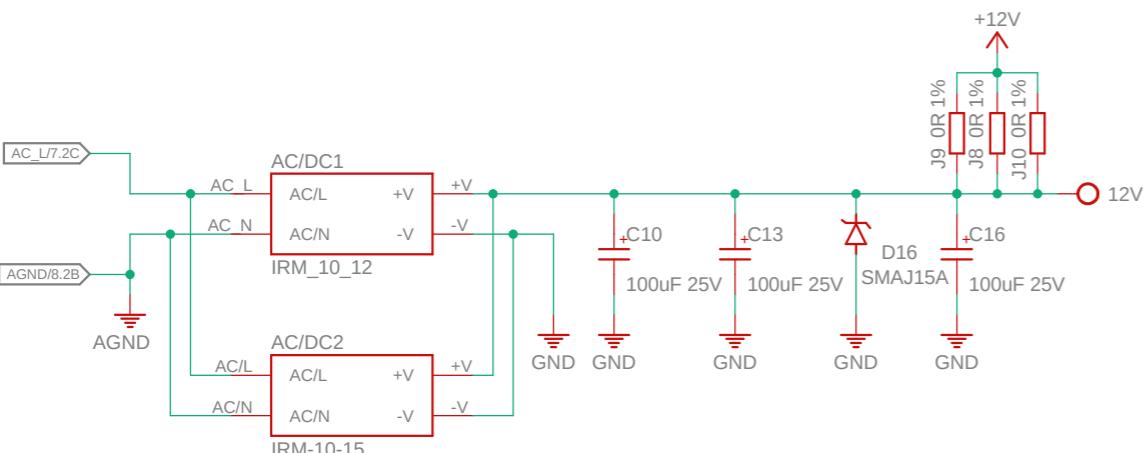


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David Sipos / DvidMakesThings

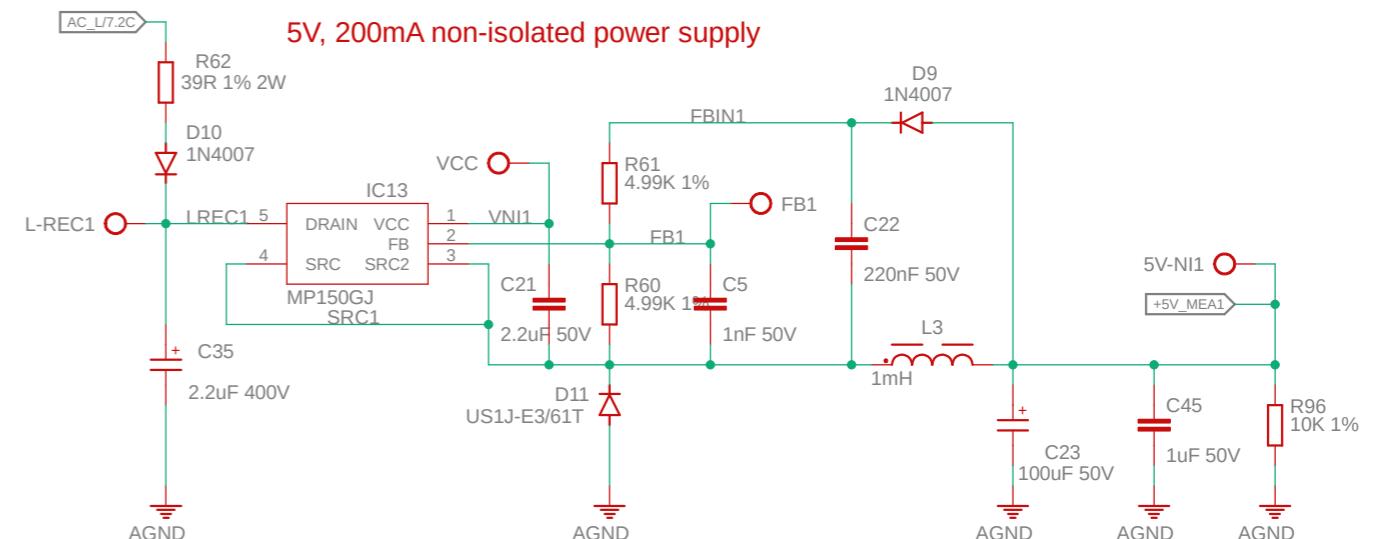
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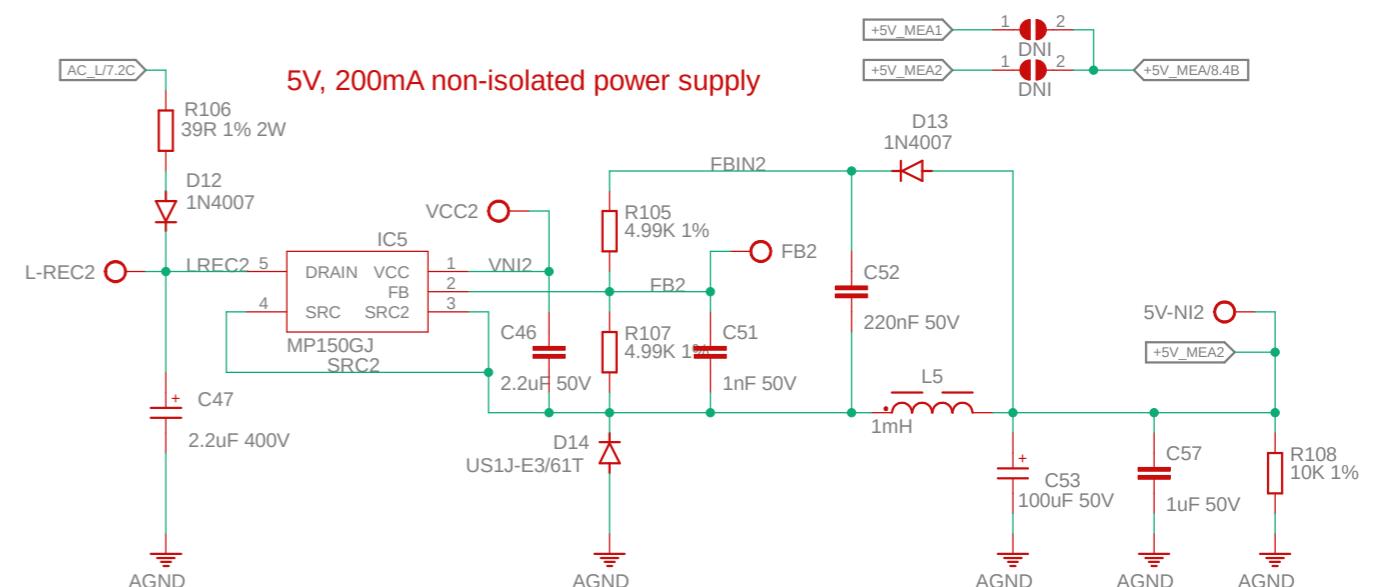
**12V - 10W FLYBACK CONVERTER****5V NON-ISOLATED**

Design Note — 12 V supply (Mean Well IRM-10 series), universal 110 V/230 V AC

This schematic uses the Mean Well IRM-10 encapsulated AC-DC module (e.g., IRM-10-12) to produce 12 VDC. The IRM-10 series is specified for a wide input range of 85–305 VAC (47–440 Hz) and 120–430 VDC, meaning it operates from both ~115 VAC and ~230 VAC mains with no selector or changes to the circuit. Safety approvals (IEC/UL/EN 62368-1), Class II construction, and built-in EMI/EMC compliance are provided by the module.



5V, 200mA non-isolated power supply



5V, 200mA non-isolated power supply

**AC-INPUT**

Design Note — 5 V / 200 mA non-isolated supply (MP150), universal 110 V/230 V AC

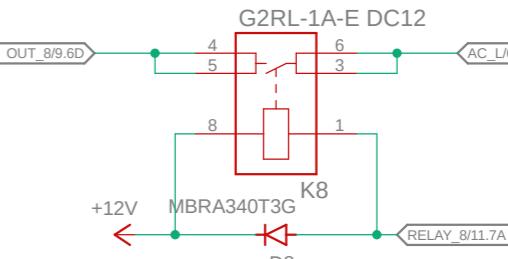
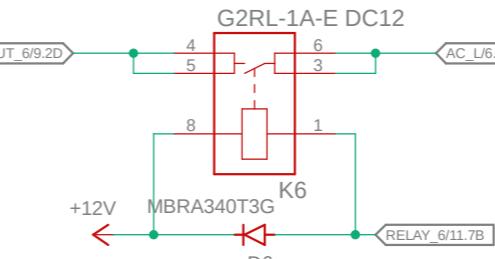
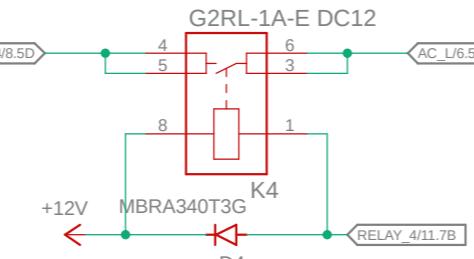
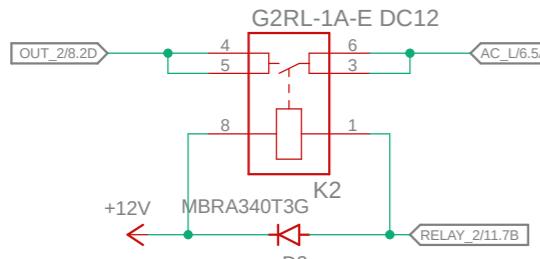
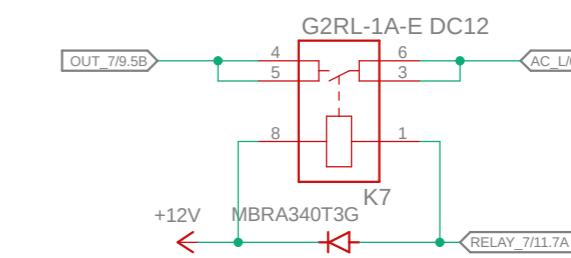
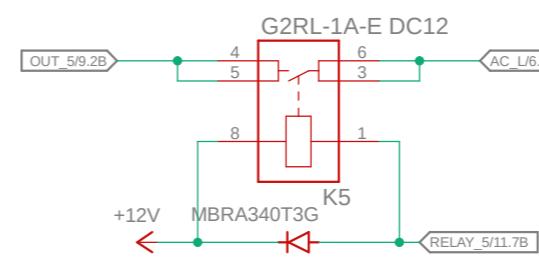
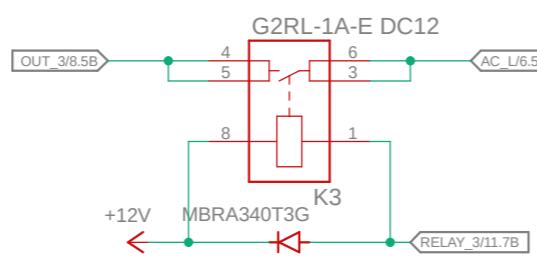
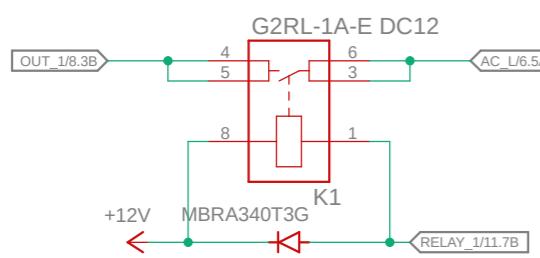
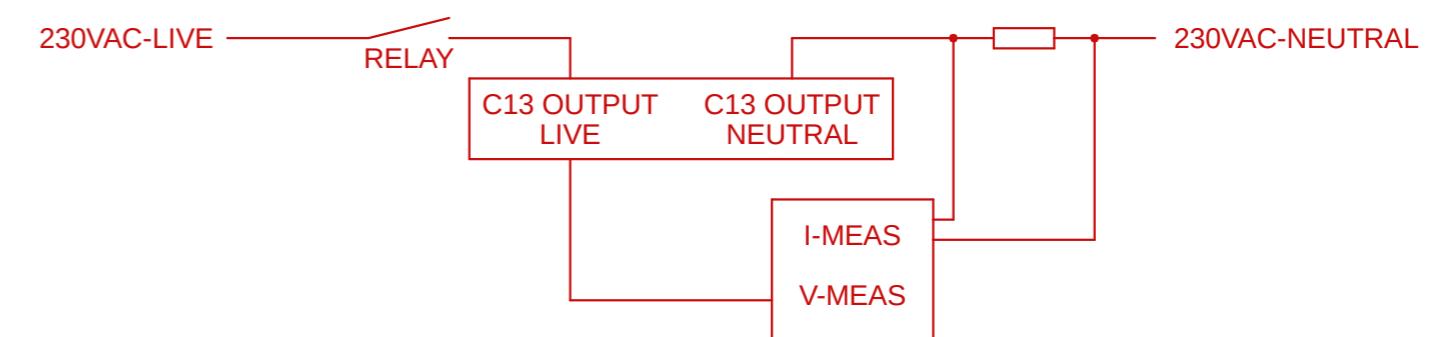
This design uses MPS MP150 in high-side buck to generate 5 V/200 mA directly from rectified mains. MP150 integrates a 500 V MOSFET (Drain-to-Source rating 500 V), covering the ~325 VDC peak from 230 VAC and ~155 VDC from 115 VAC, so the circuit from 85–265 VAC ("universal input").

**MAIN BOARD**

1.1.0  
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1 2 3 4 5 6 7 8

## A OUTPUT RELAYS

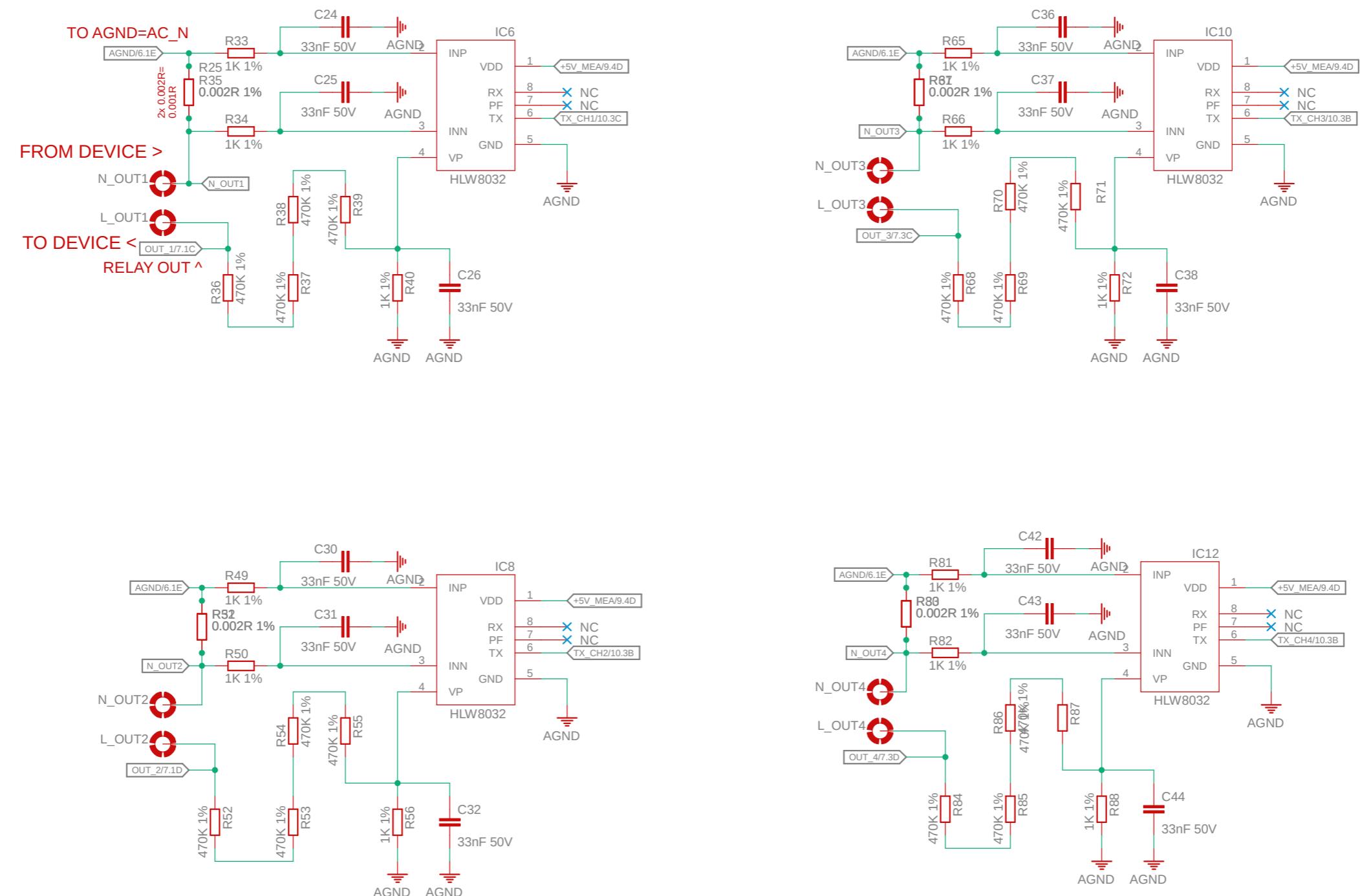


<b>MAIN BOARD</b>	
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1 2 3 4 5 6 7 8

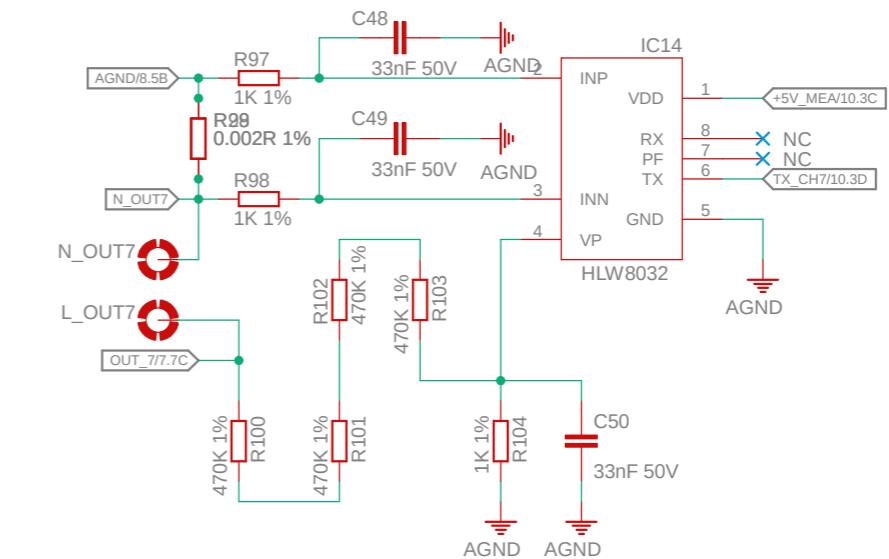
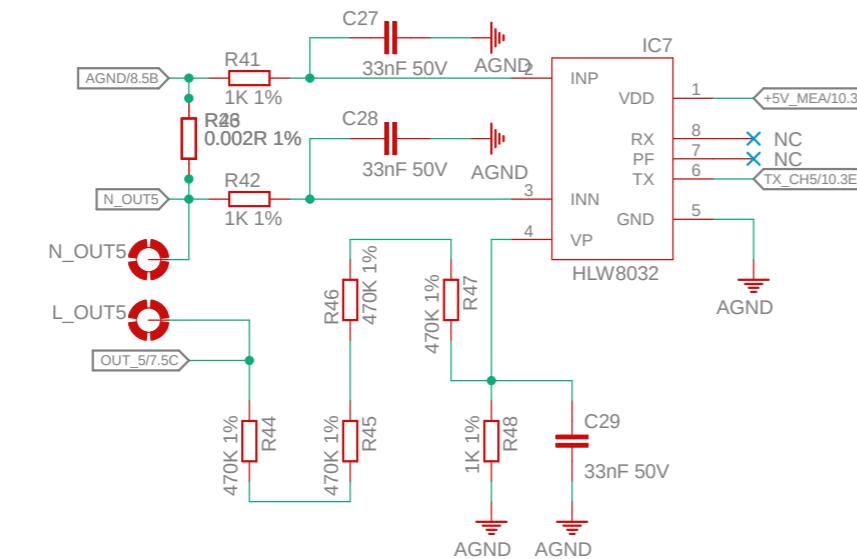
# AC CHANNEL MEASUREMENT



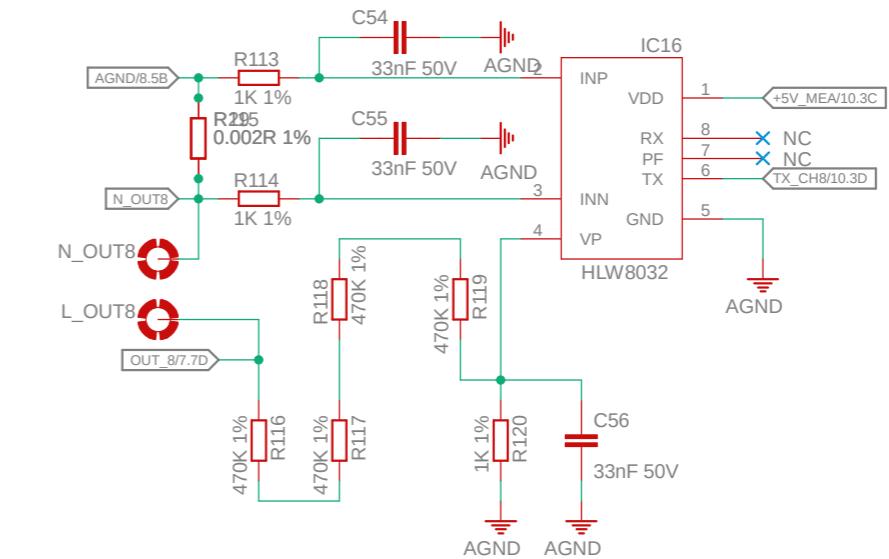
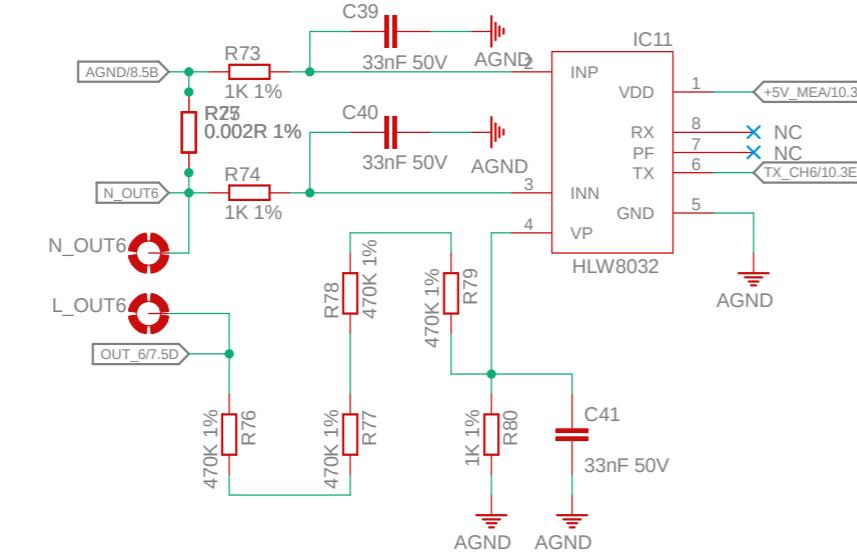
MAIN BOARD	
1.1.0	ENERGIS_Rack-PDU_1.1.0
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David Sipos / DvidMakesThings	
Sheet: 8/11	

# AC CHANNEL MEASUREMENT

A



B



C

D

E

A

B

C

D

E

MAIN BOARD

1.1.0

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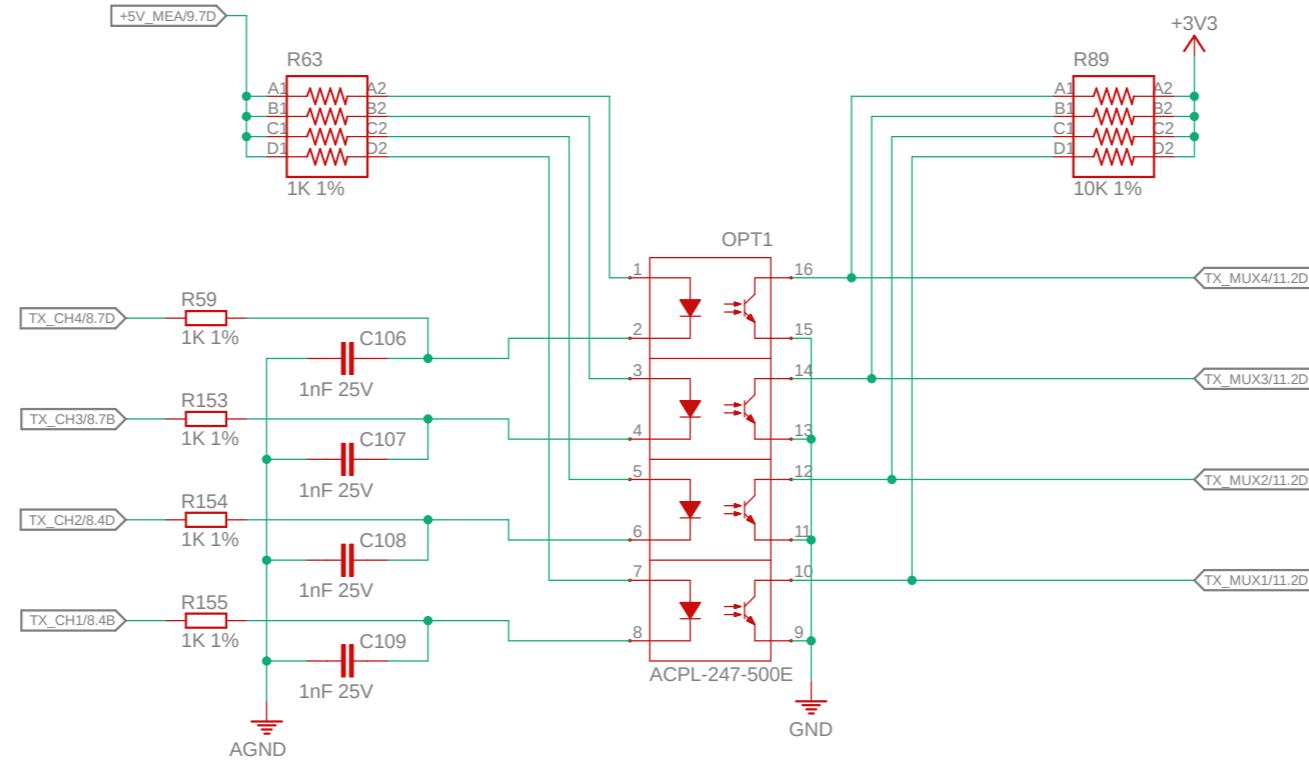
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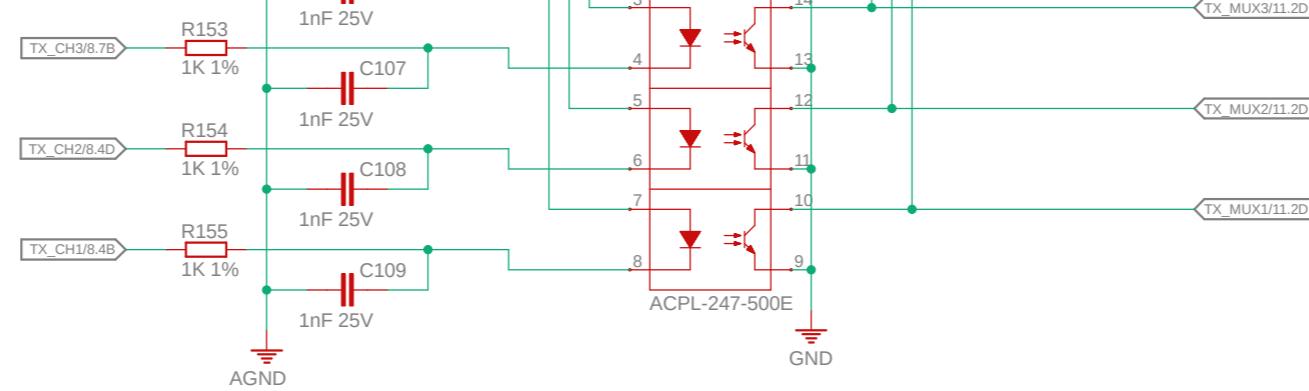
# SERIAL OPTOISOLATOR

A



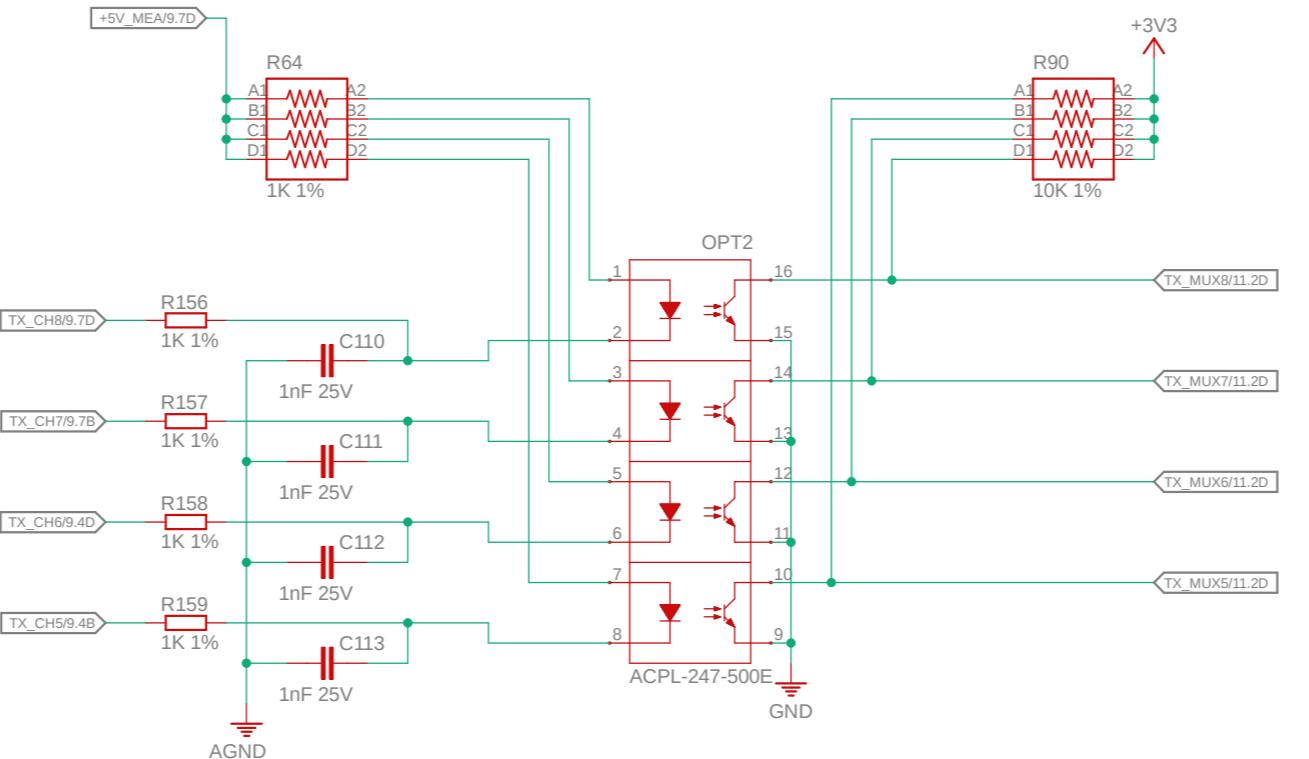
A

B



B

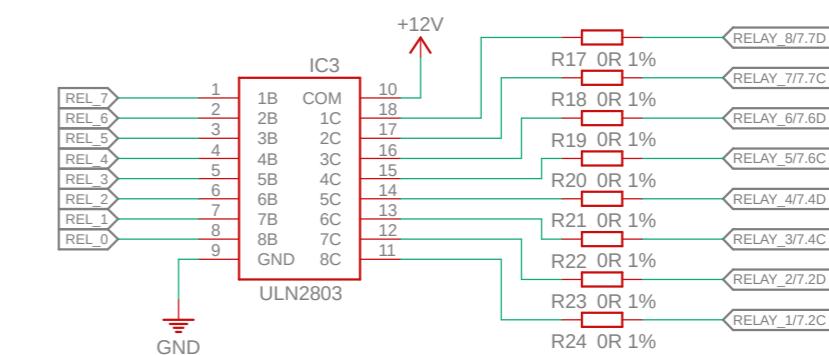
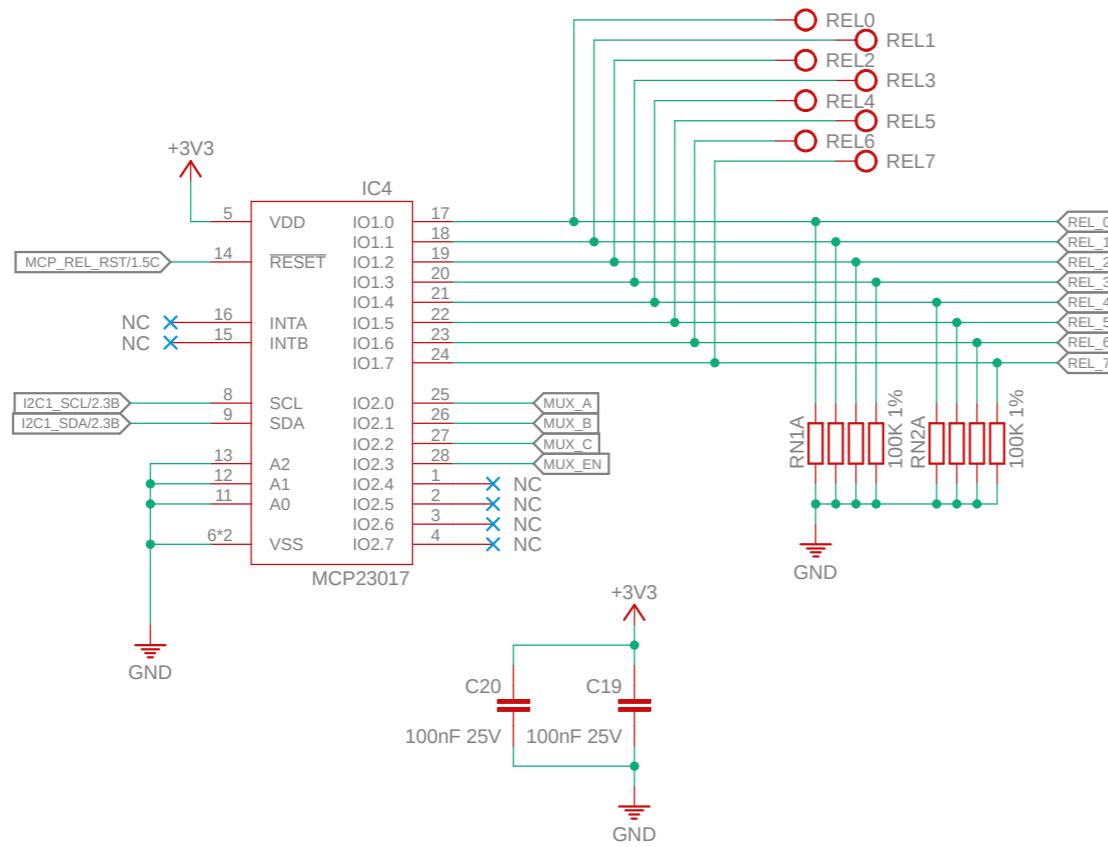
C



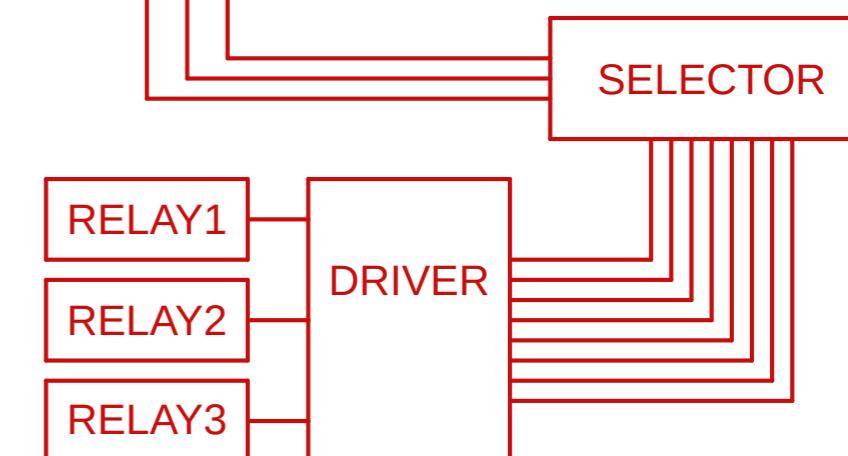
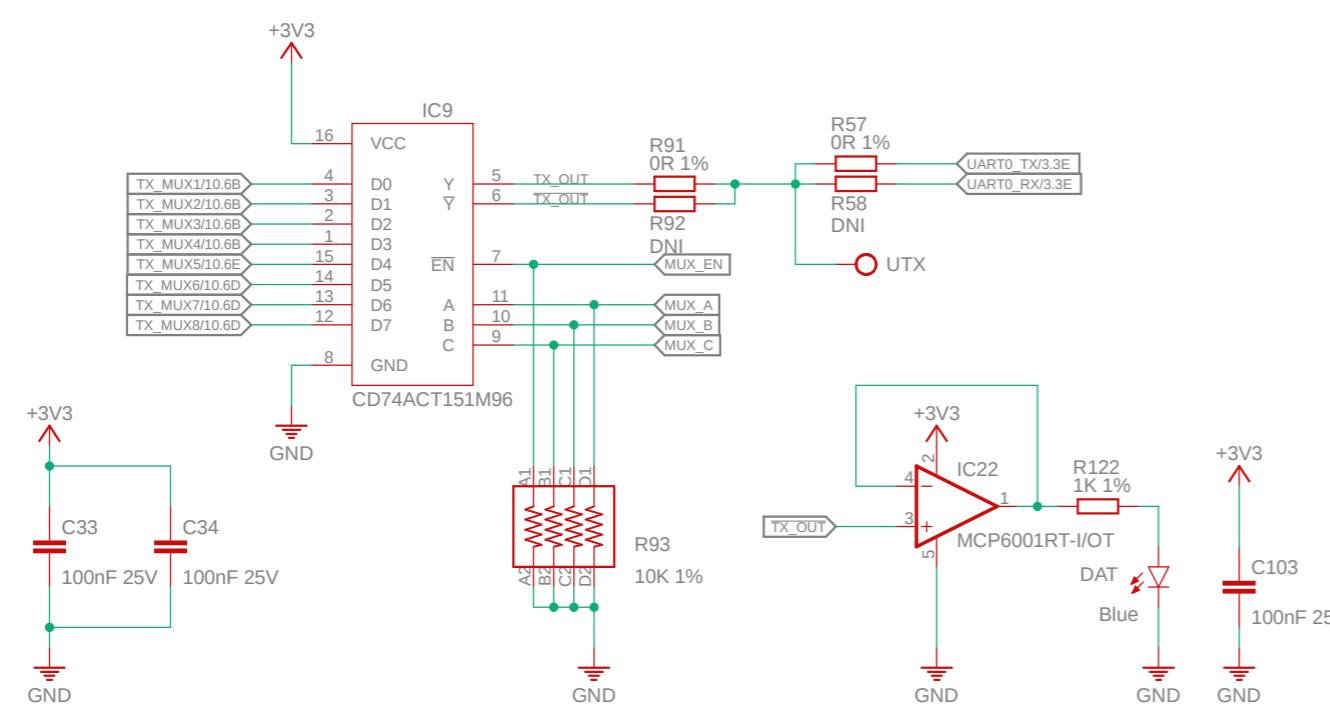
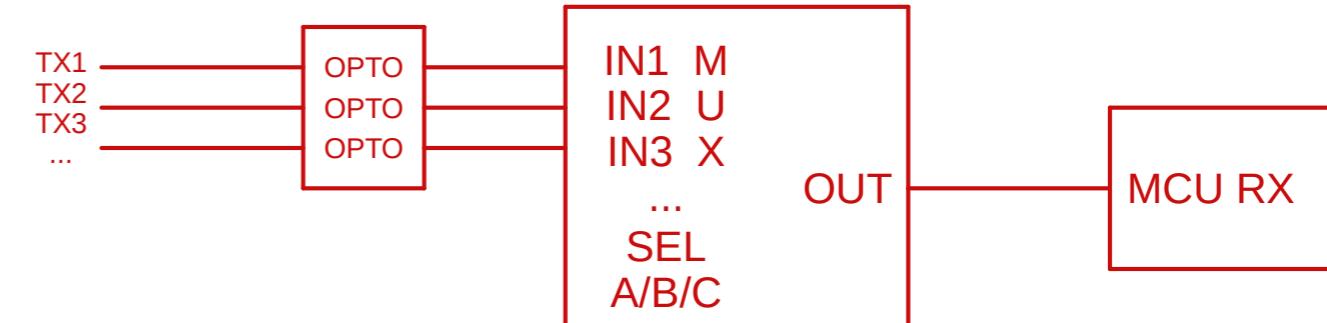
C

D

E



## SERIAL MUX



MAIN BOARD

MAIN BOARD  
1.1.0  
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