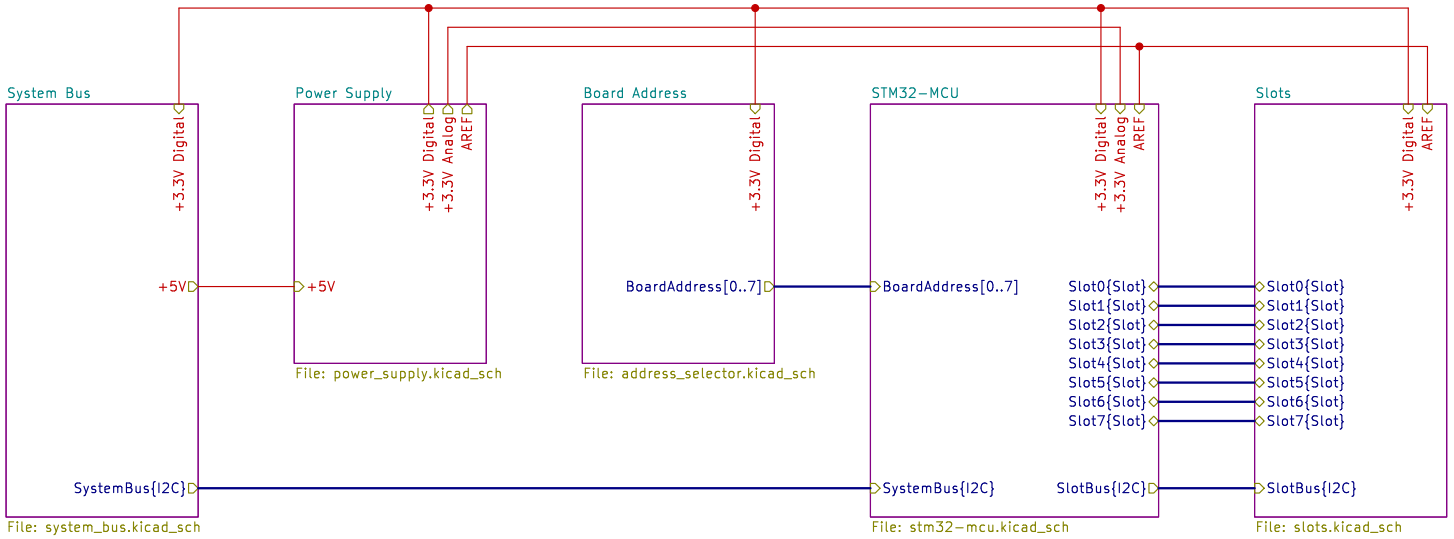
# Sub-Board System Architecture




**Dennis Schulmeister-Zimolong**

Sheet: /
File: Sub-Board.kicad_sch

***Title: Modular Music Controller / Sub-Board / Architecture***

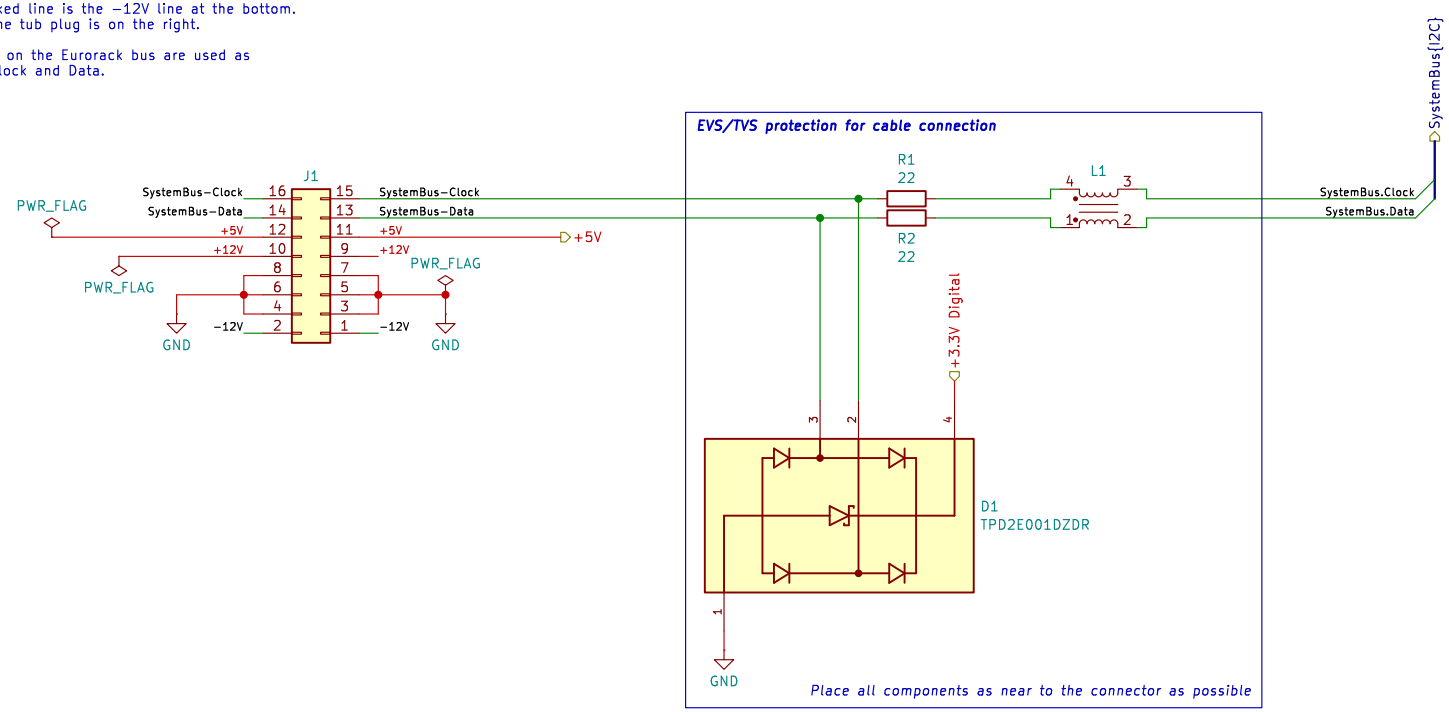
| Size: A4 | Date: 2025-12-02 | **Rev: 2** |
|---|---|---|
| KiCad E.D.A. 9.0.5 | | Id: 1/6 |

# System Bus

The system bus connector is just a 8x2 pin header compatible with the Eurorack/A-100 system bus.

The red marked line is the -12V line at the bottom. The slit of the tub plug is on the right.

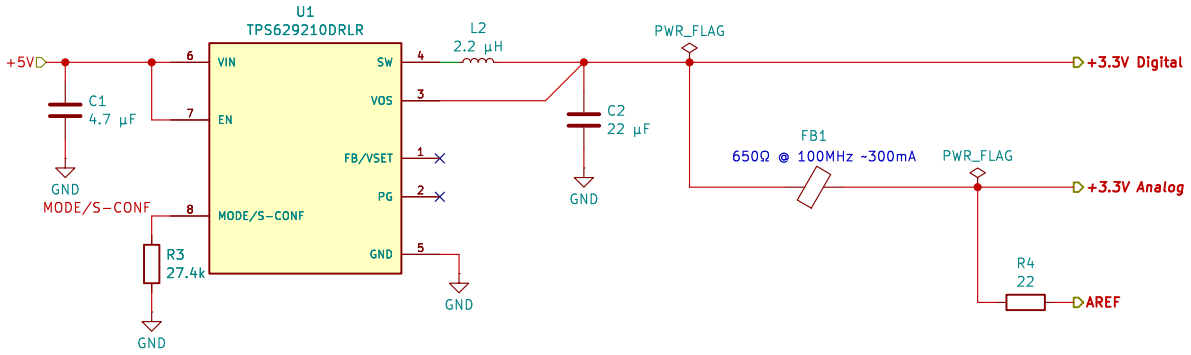
GATE and CV on the Eurorack bus are used as SystemBus.Clock and Data.




| | | |
|---|---|---|
| Dennis Schulmeister-Zimolong | | |
| Sheet: /System Bus/ | | |
| File: system_bus.kicad_sch | | |
| **Title: Modular Music Controller / Sub-Board / System Bus** | | |
| Size: A4 | Date: 2025-12-02 | **Rev: 2** |
| KiCad E.D.A. 9.0.5 | | Id: 2/6 |

# Power Supply

MODE = 24.7 kOhm = VSET / AutoPWM
FB/SET open = 3.3 V output





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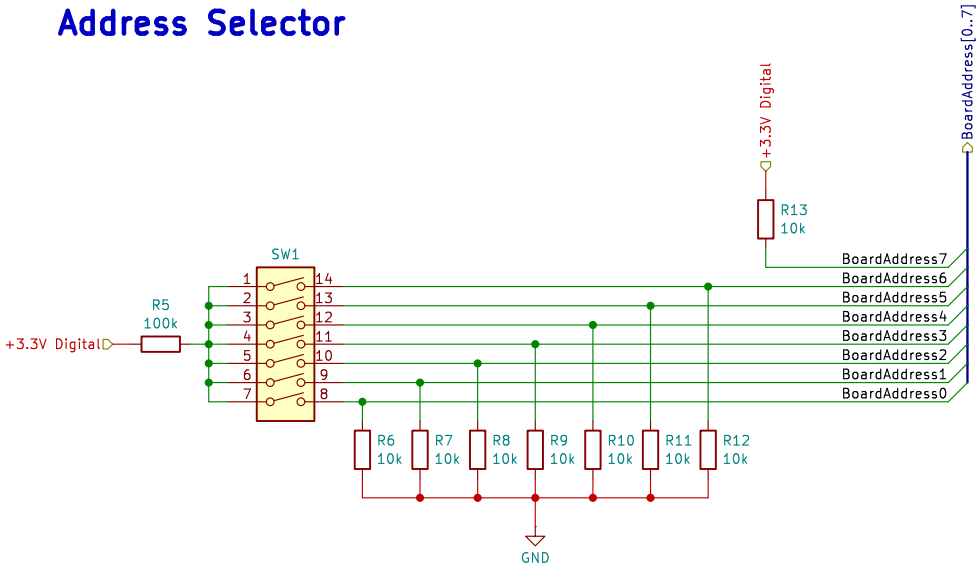
Sheet: /Power Supply/
File: power_supply.kicad_sch

**Title: Modular Music Controller / Sub-Board / Power Supply**

| Size: A4 | Date: 2025-12-02 | **Rev: 2** |
|---|---|---|
| KiCad E.D.A. 9.0.5 | | Id: 3/6 |

# Address Selector





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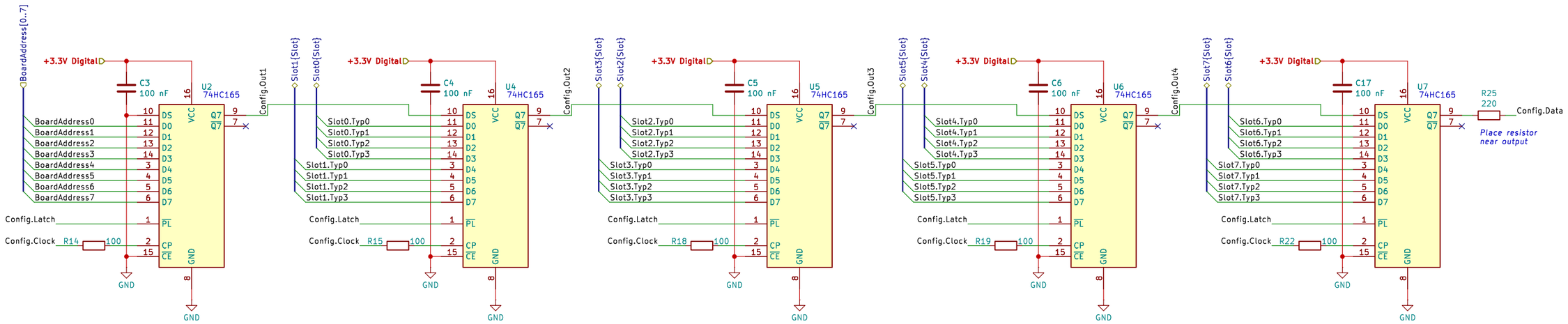
Sheet: /Board Address/
File: address_selector.kicad_sch

***Title: Modular Music Controller / Sub-Board / Address Selector***

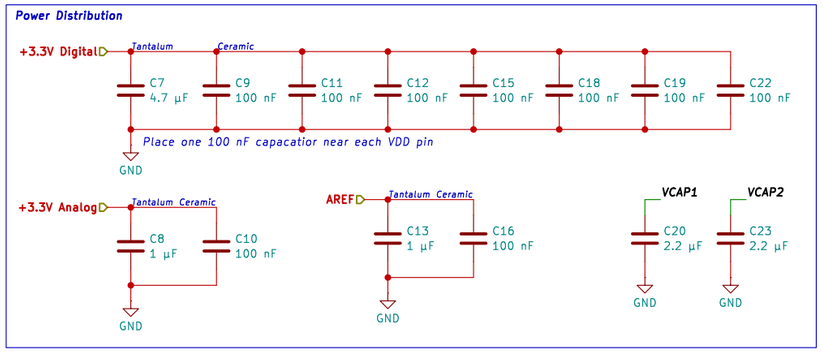
| | | |
|---|---|---|
| Size: A4 | Date: 2025-12-02 | **Rev: 2** |
| KiCad E.D.A. 9.0.5 | | Id: 4/6 |

# STM32 Microcontroller for Controller Logic

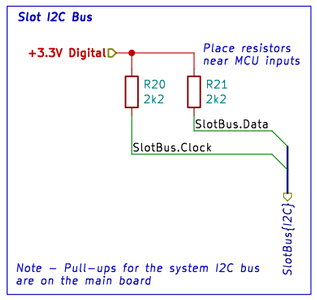
## Board Configuration



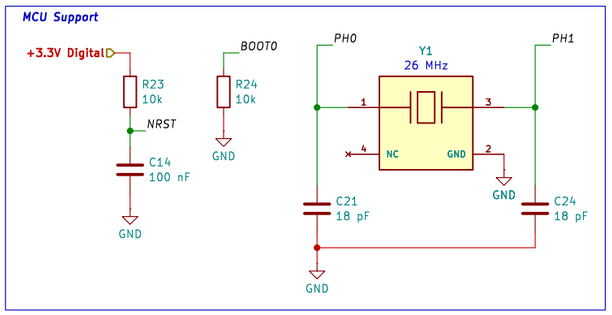

## Power Distribution



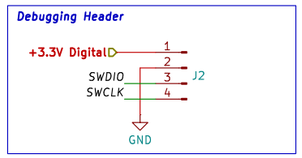

## Slot I2C Bus



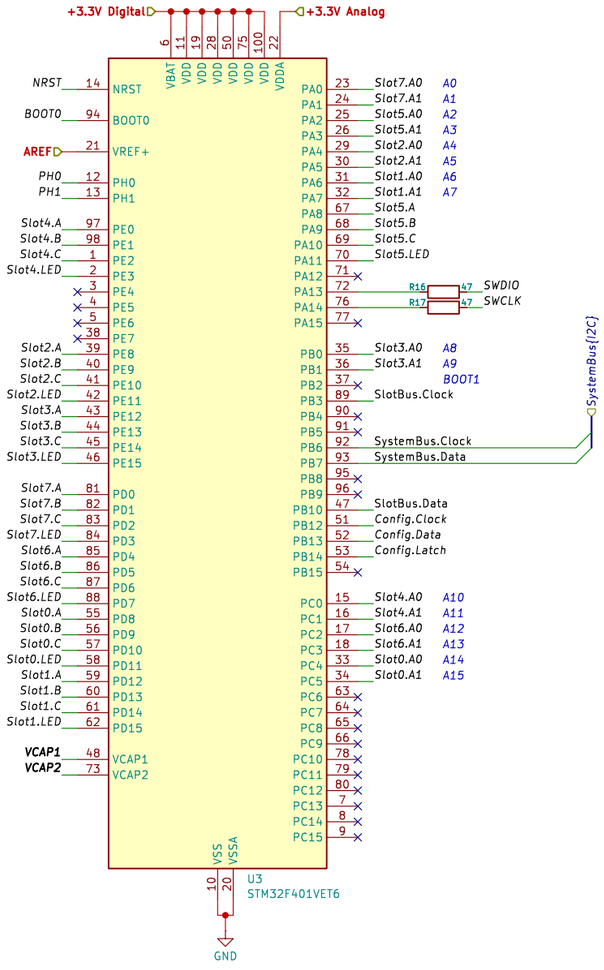

## MCU Support




## Debugging Header




GPIO pins assigned to simplify PCB routing





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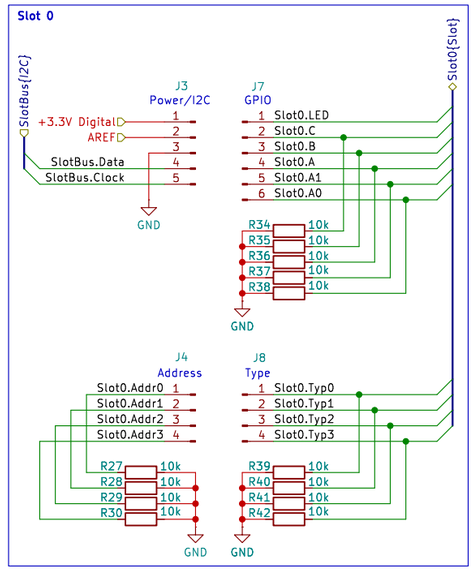
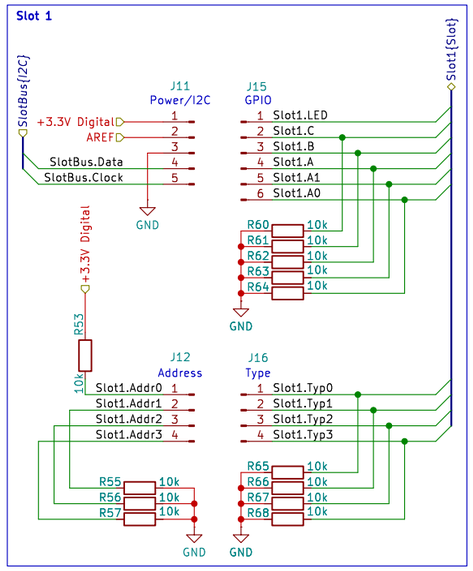
Sheet: /STM32-MCU/
File: stm32-mcu.kicad_sch

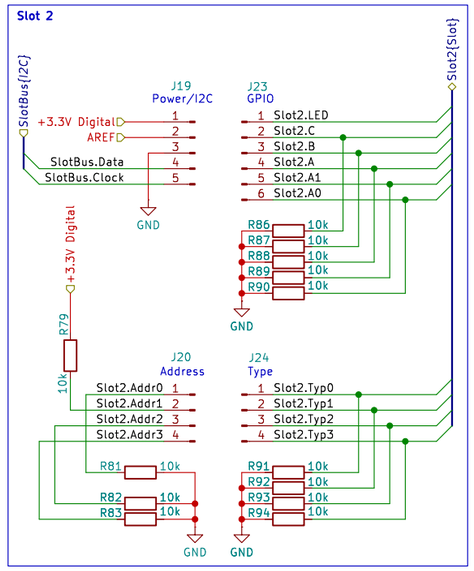
**Title: Modular Music Controller / Sub-Board / STM32 MCU**

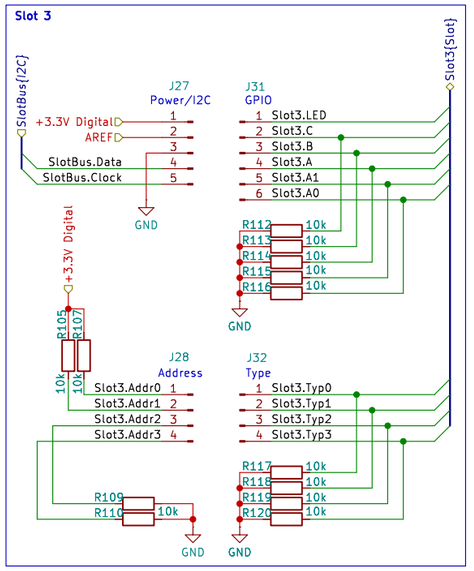
| Size: A3 | Date: 2025-12-02 | **Rev: 2** |
|---|---|---|
| KiCad E.D.A. 9.0.5 | | Id: 5/6 |

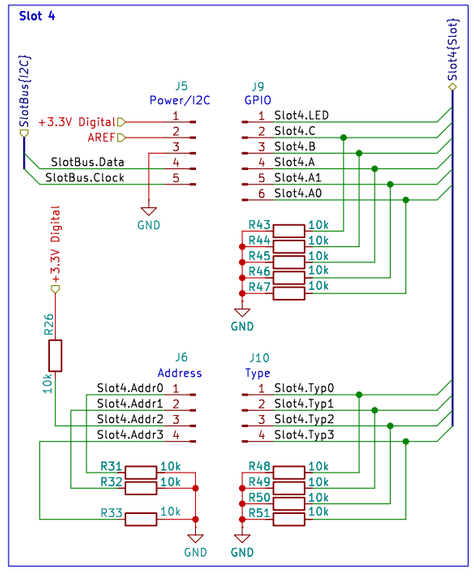
# Controller Slots

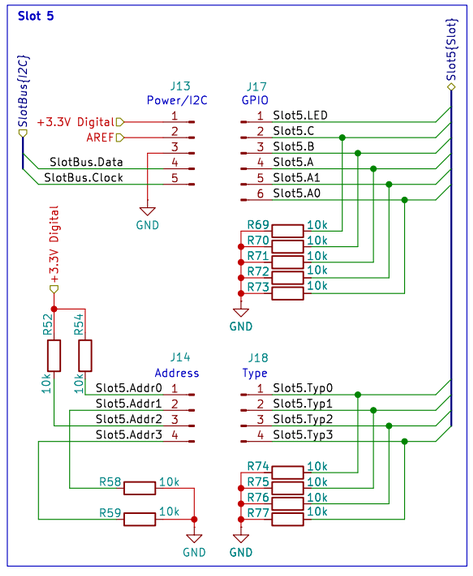


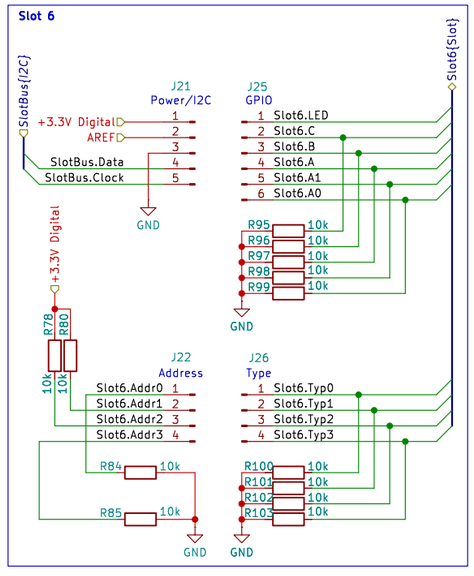



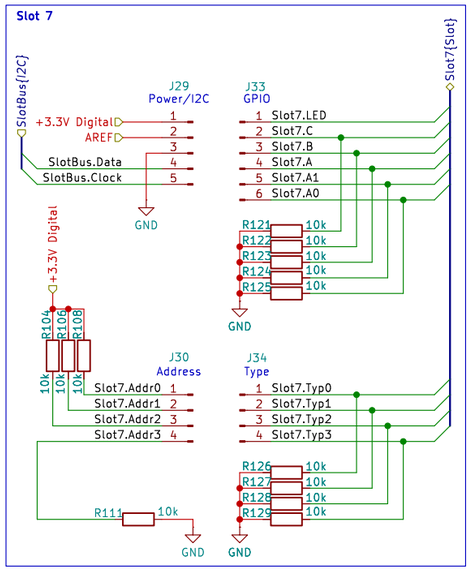

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Sheet: /Slots/
File: slots.kicad_sch

**Title: Modular Music Controller / Sub-Board / Controller Slots**

| Size: A3 | Date: 2025-12-02 | **Rev: 2** |
|---|---|---|
| KiCad E.D.A. 9.0.5 | | Id: 6/6 |