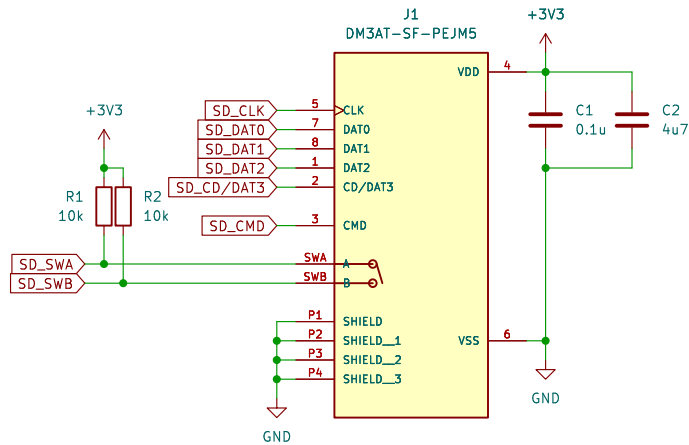
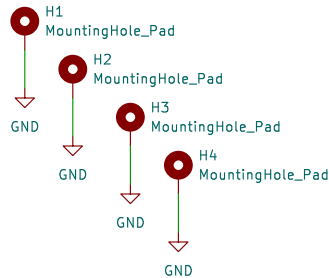
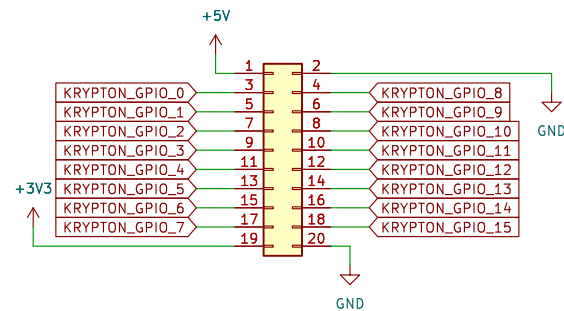
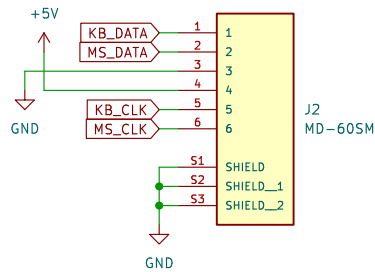


# Argon I/O ports

## Micro-SD slot

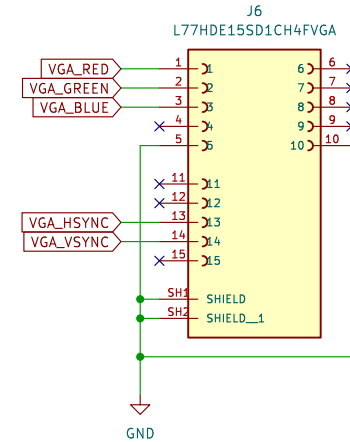


## PS/2 port (Mini DIN-6)

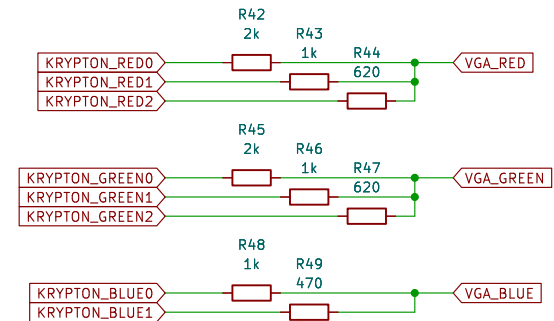


# Krypton VGA port

## VGA port



## VGA digital -> analog circuit



VGA has 75 ohm resistors at the end of each color line. These resistors are creating a voltage divider to give the VGA monitor voltages between 0 and +0.7V

# GPIO ports

Preston Zoder

Sheet: /  
File: Oganesson Retro Computer.kicad\_sch

Title: Oganesson Minicomputer

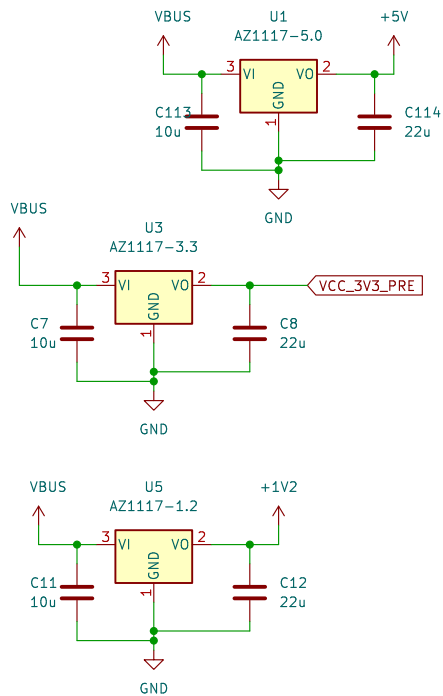
Size: USLetter Date: 2024-09-25

KiCad E.D.A. 8.0.6

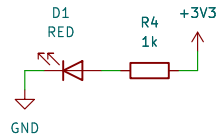
Rev: v1

Id: 1/10

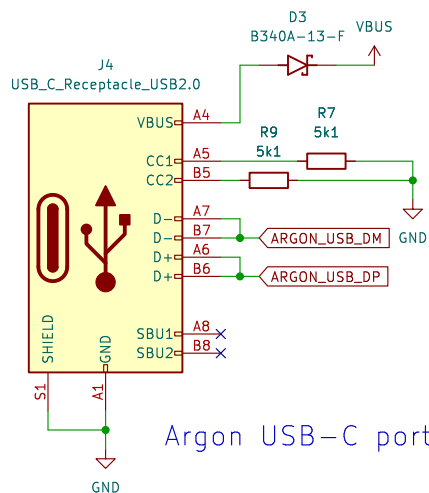
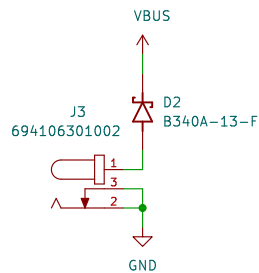
## Voltage Regulators



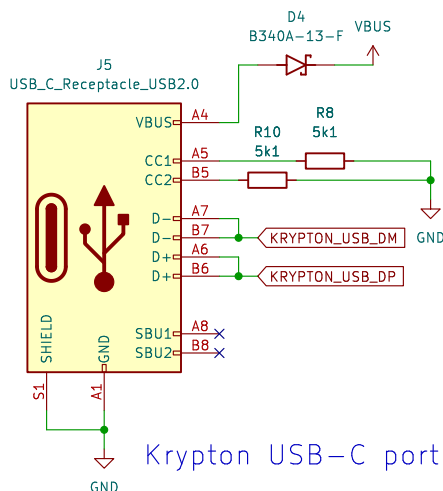
## Power Indicator LED



## Barrel Jack



Argon USB-C port



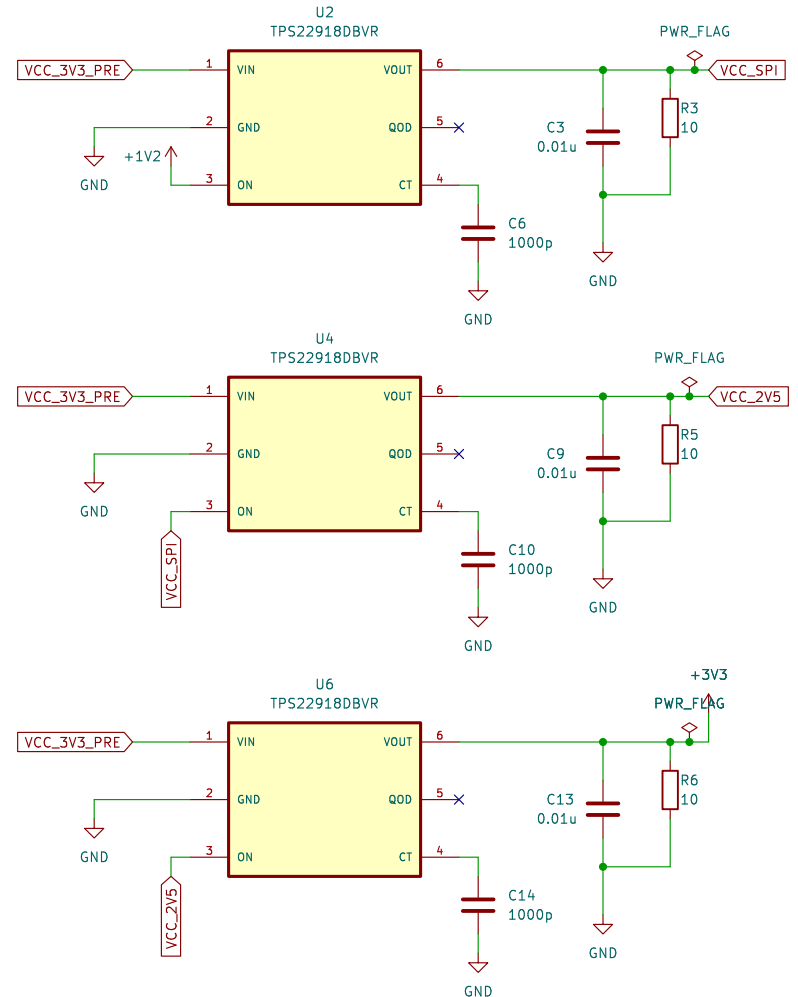
Krypton USB-C port

## Voltage order:

1. VCC / VCC\_PLL (+1V2)
2. VCC\_SPI (+3V3)
3. VPP\_2V5 (+3V3)
4. VCC\_IO (+3V3)

## Load switches

+3V3  
Rise time: 1680 us  
CT: 1000 pF  
CL: 0.01 uF  
RL: 10 ohm  
Rise rate: 1.96V/ms



## Power + USB-C ports

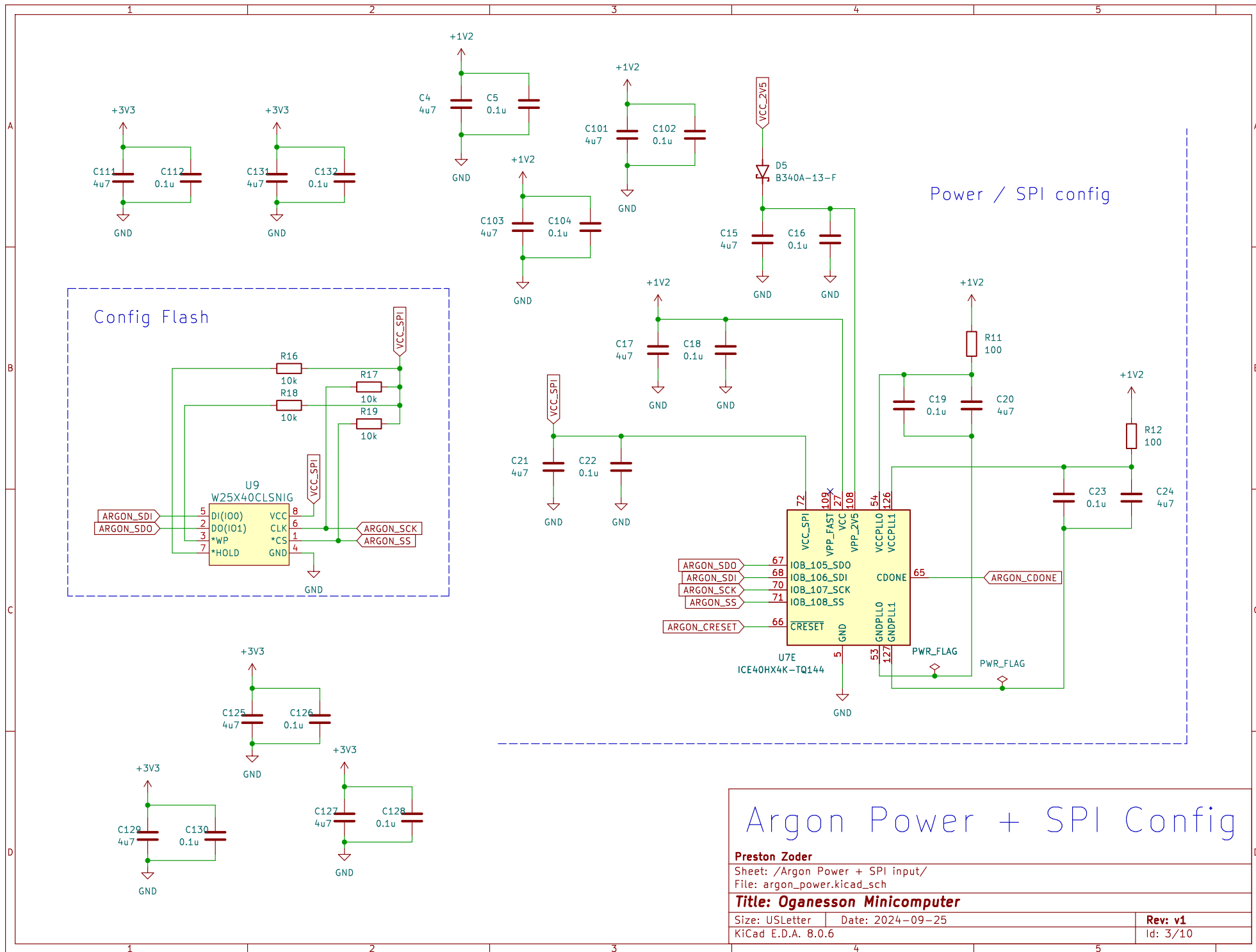
Preston Zoder

Sheet: /Power + USB/  
File: input\_output.kicad\_sch

**Title: Oganesson Minicomputer**

Size: USLetter Date: 2024-09-25  
KiCad E.D.A. 8.0.6

Rev: v1  
Id: 2/10



# Argon Power + SPI Config

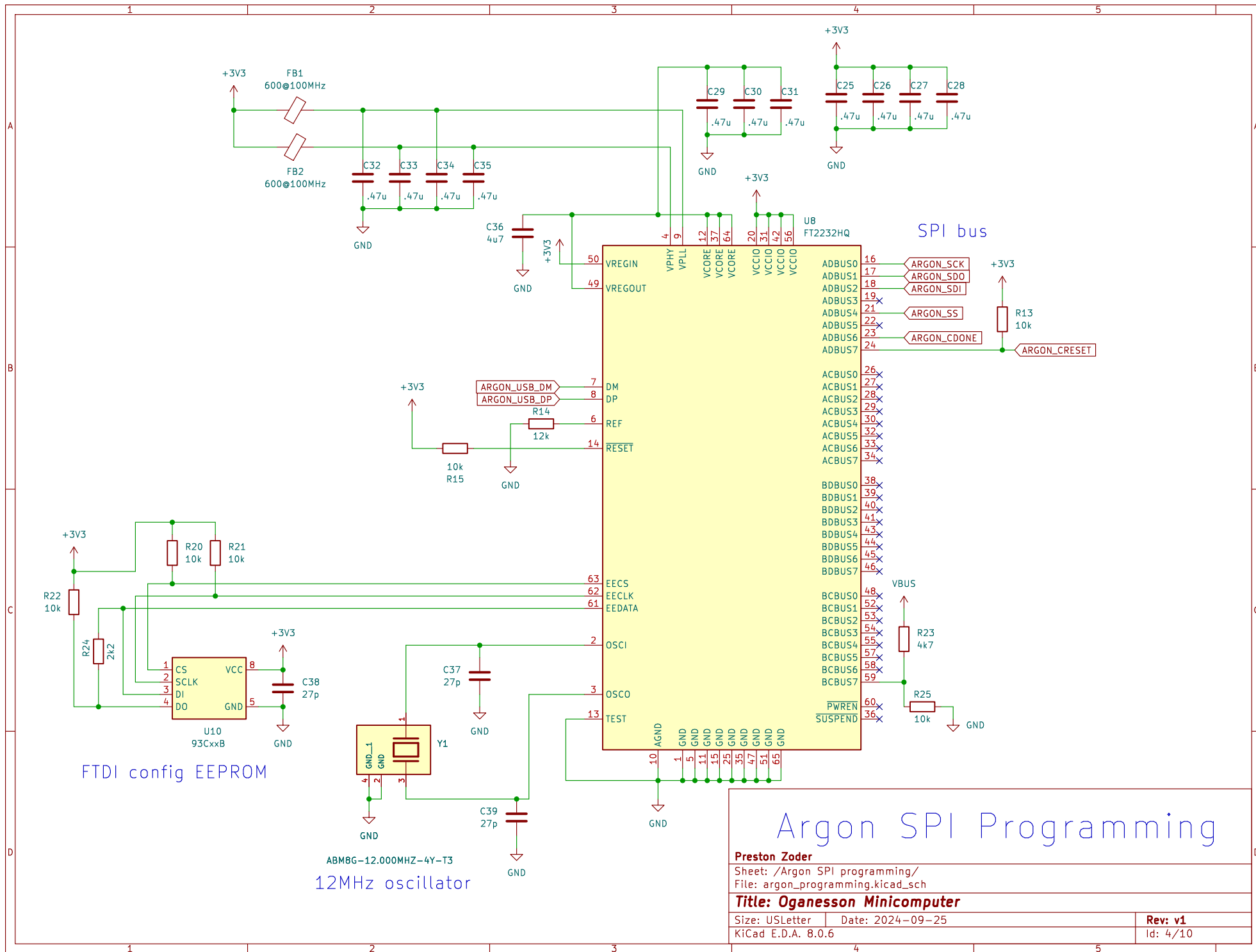
Preston Zoder

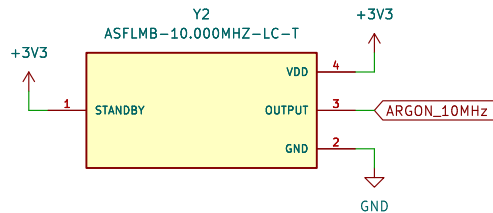
Sheet: /Argon Power + SPI input/  
File: argon\_power.kicad\_sch

**Title: Oganesson Minicomputer**

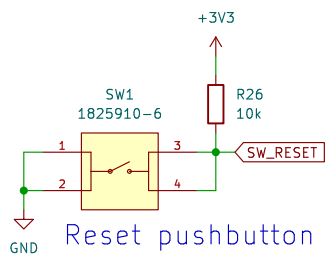
Size: USLetter | Date: 2024-09-25  
KiCad E.D.A. 8.0.6

Rev: v1  
Id: 3/10

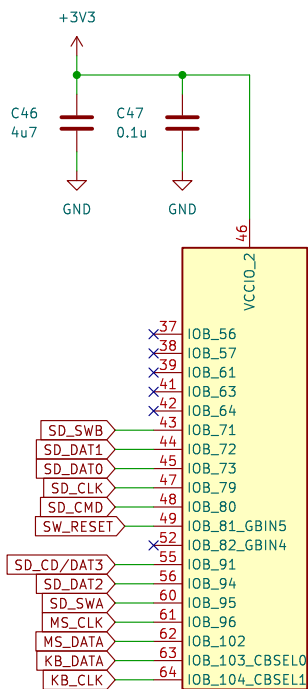




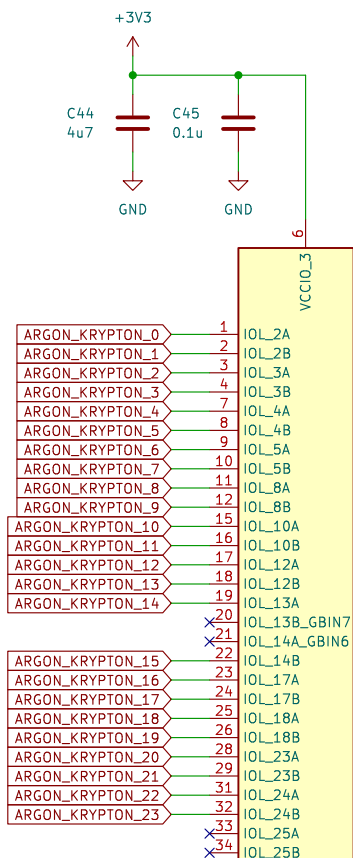
10MHz MEMS oscillator



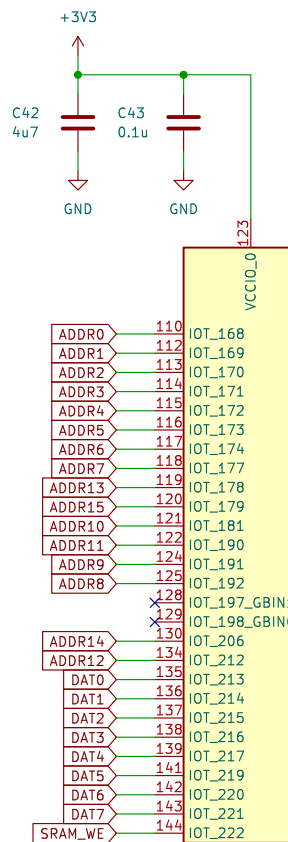
Reset pushbutton



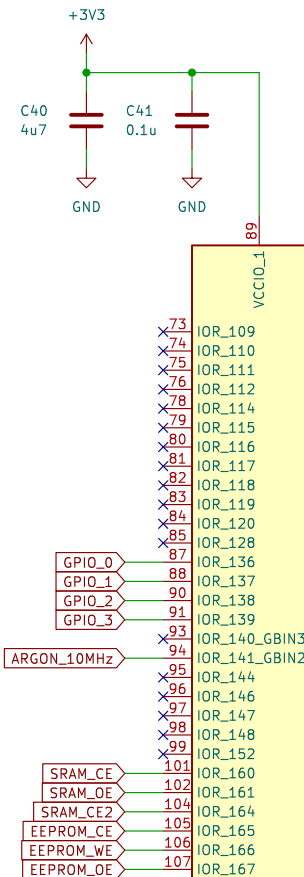
U7C  
ICE40HX4K-TQ144



U7D  
ICE40HX4K-TQ144



U7A  
ICE40HX4K-TQ144



U7B  
ICE40HX4K-TQ144

## Argon I/O banks

Preston Zoder

Sheet: /Argon IO banks/

File: argon\_io.kicad\_sch

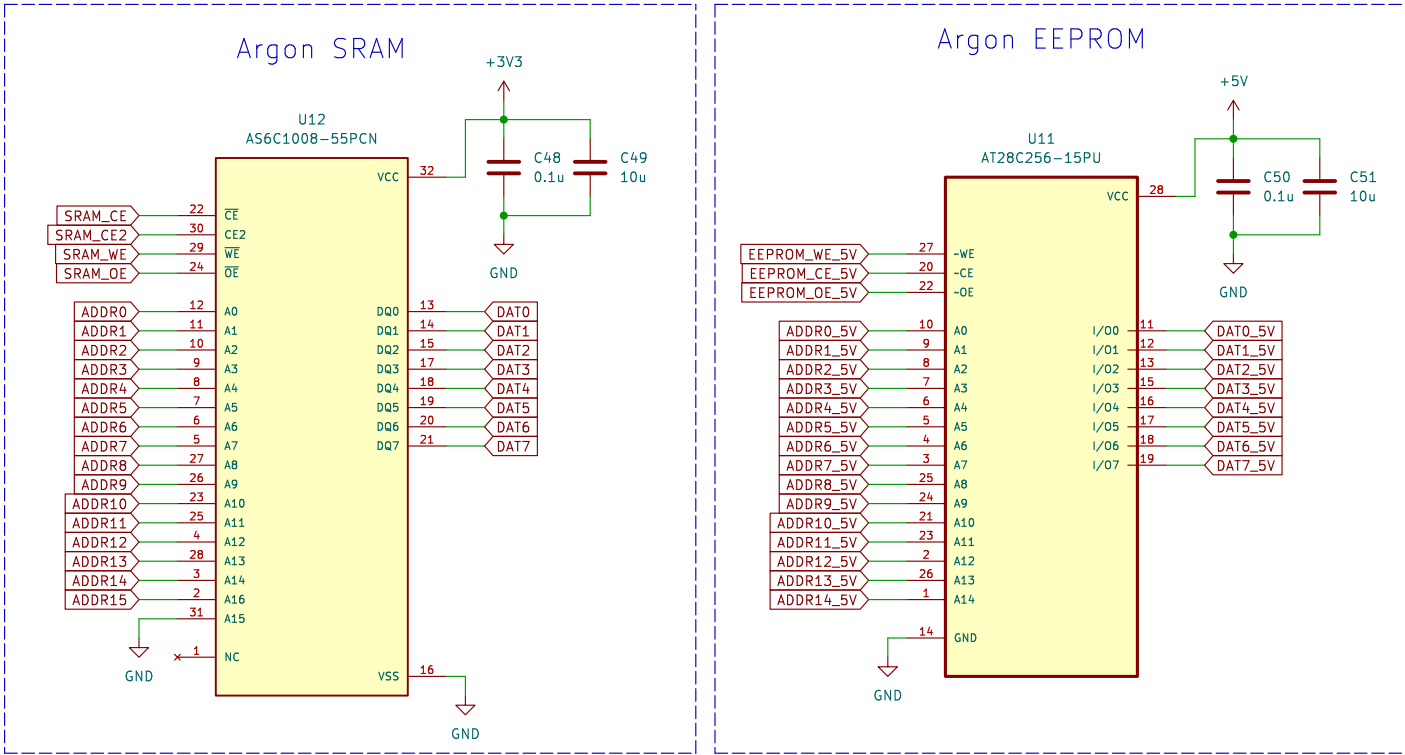
**Title: Oganesson Minicomputer**

Size: USLetter Date: 2024-09-25

KiCad E.D.A. 8.0.6

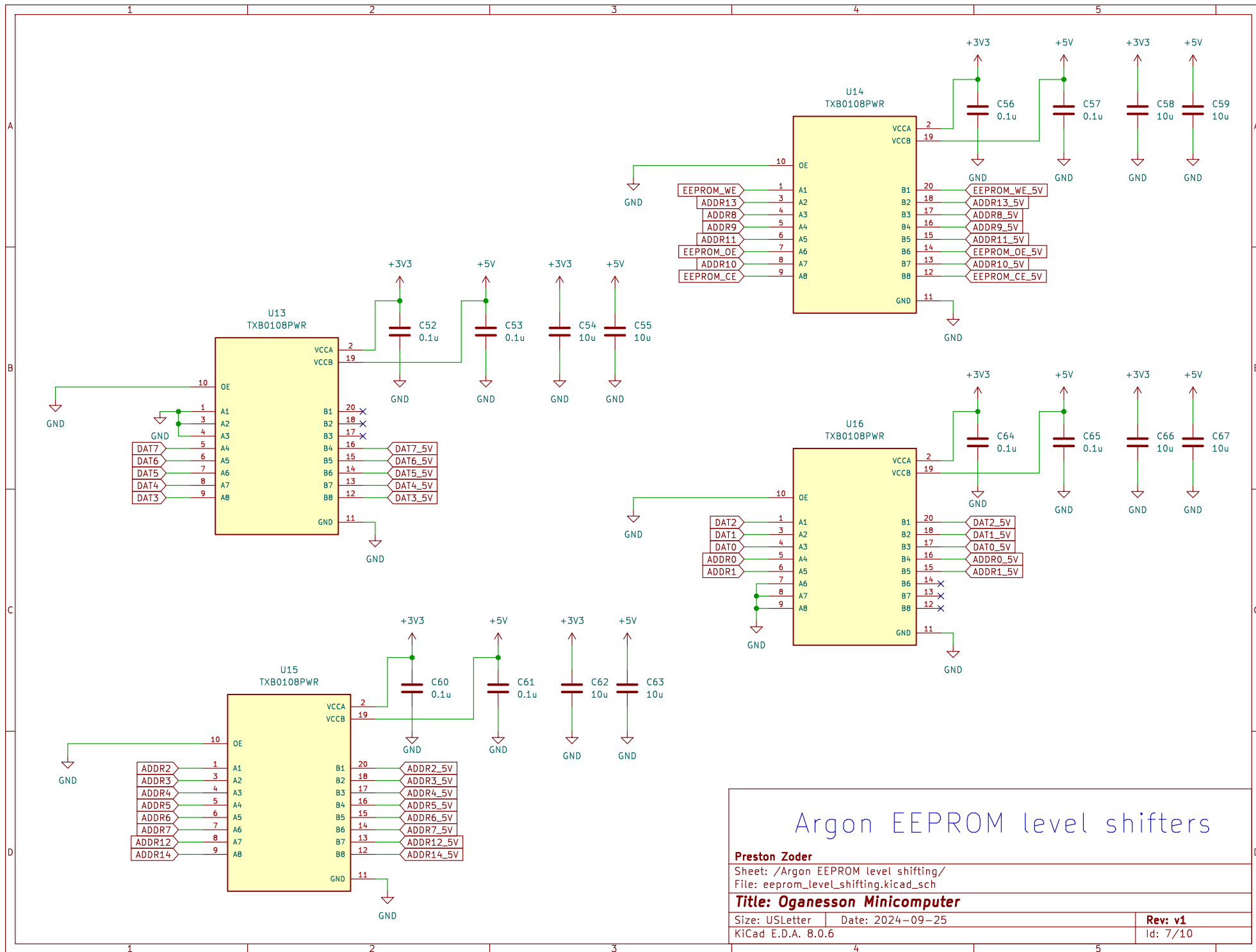
Rev: v1

Id: 5/10



# Argon Memory

Preston Zoder	
Sheet: /Argon Memory/	
File: argon_memory.kicad_sch	
Title: Oganesson Minicomputer	
Size: USLetter	Date: 2024-09-25
KiCad E.D.A. 8.0.6	Rev: v1
	Id: 6/10



## Argon EEPROM level shifters

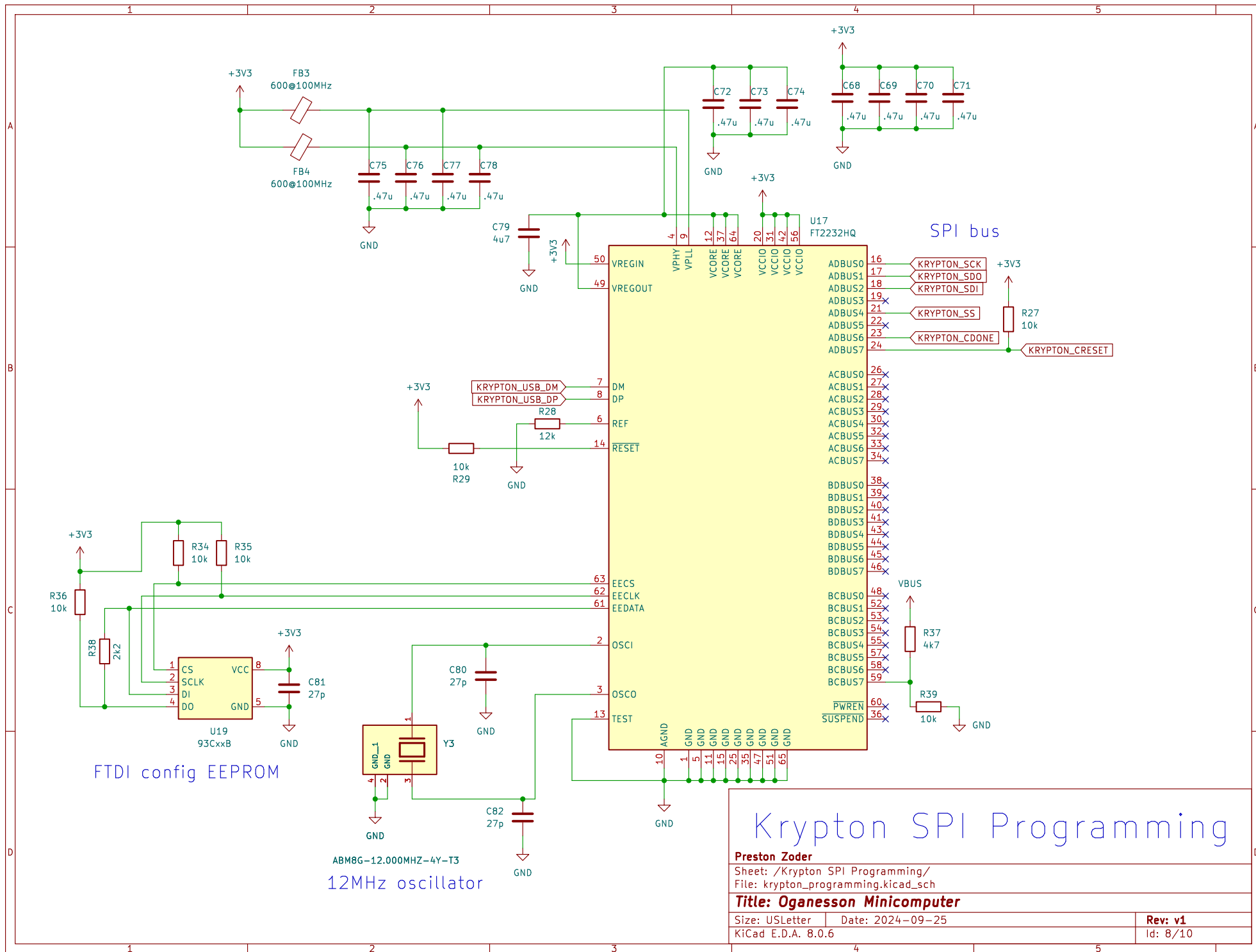
Preston Zoder

Sheet: /Argon EEPROM level shifting/  
File: eeprom\_levelshifting.kicad\_sch

**Title: Oganesson Minicomputer**

Size: USLetter Date: 2024-09-25  
KiCad E.D.A. 8.0.6

Rev: v1  
Id: 7/10



# Krypton SPI Programming

Preston Zoder

Sheet: /Krypton SPI Programming/  
File: krypton\_programming.kicad\_sch

**Title: Oganesson Minicomputer**

Size: USLetter Date: 2024-09-25

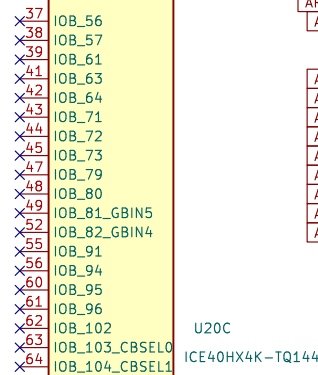
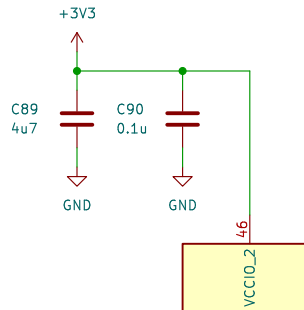
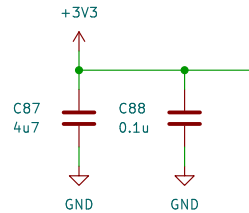
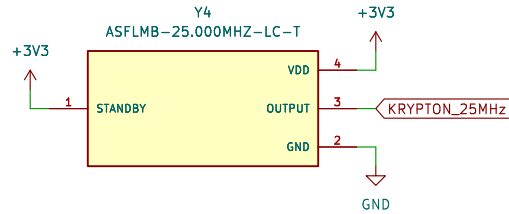
KiCad E.D.A. 8.0.6

Rev: v1

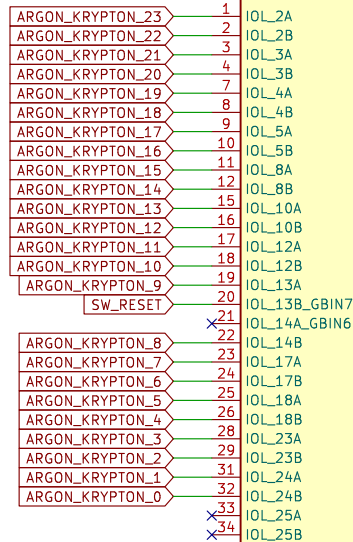
Id: 8/10



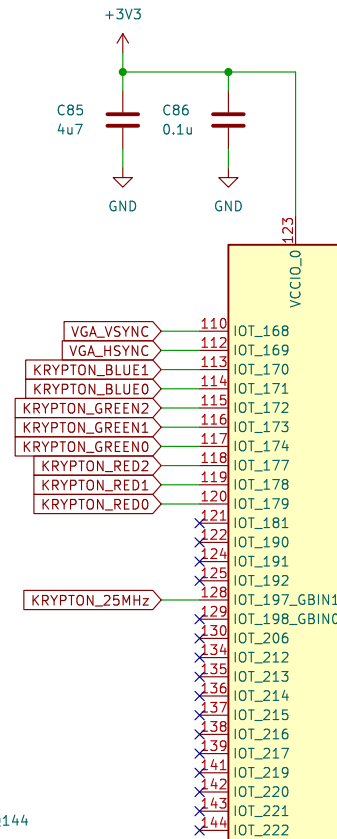
## 25MHz MEMS oscillator



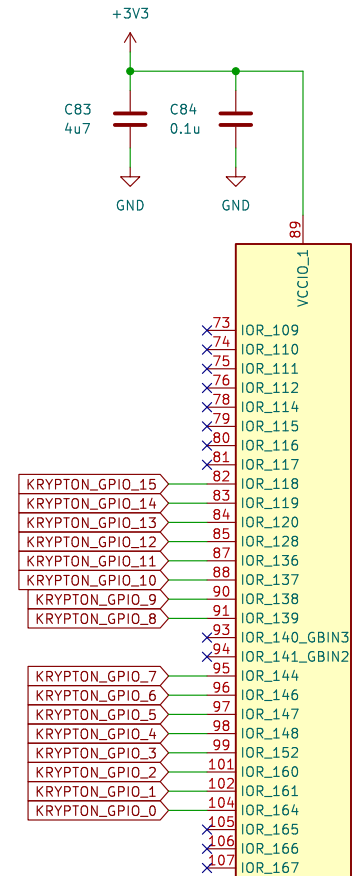
U20C  
ICE40HX4K-TQ144



U20D  
ICE40HX4K-TQ144



U20A  
ICE40HX4K-TQ144



U20B  
ICE40HX4K-TQ144

## Krypton I/O Banks

Preston Zoder

Sheet: /Krypton IO Banks/  
File: krypton\_io.kicad\_sch

**Title: Oganesson Minicomputer**

Size: USLetter Date: 2024-09-25  
KiCad E.D.A. 8.0.6

Rev: v1  
Id: 9/10

