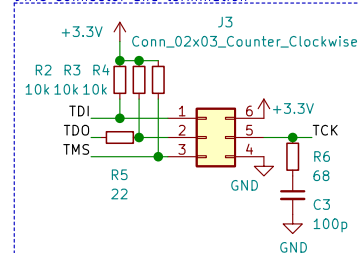


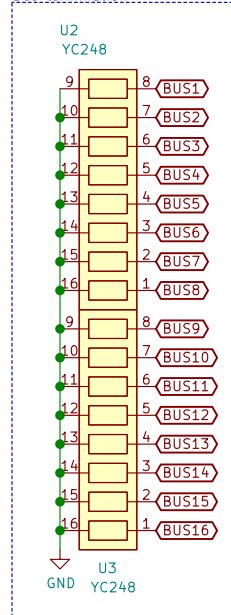
The reset logic is pretty simple, so the or function is handled with diode logic



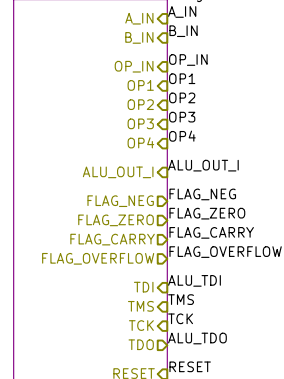
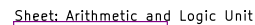
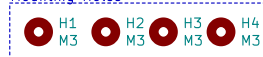
```

    TDI_ALU_TDI
    ALU_TDO_PC_TDI
    PC_TDO_CTRL_TDI
    CTRL_TDO_TDO

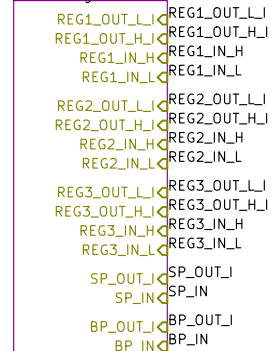
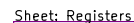
```



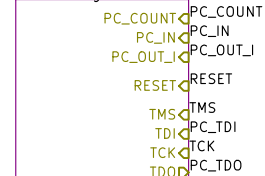
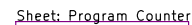
The pull down values should be 10k



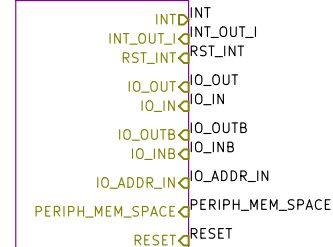
File: alu.sch



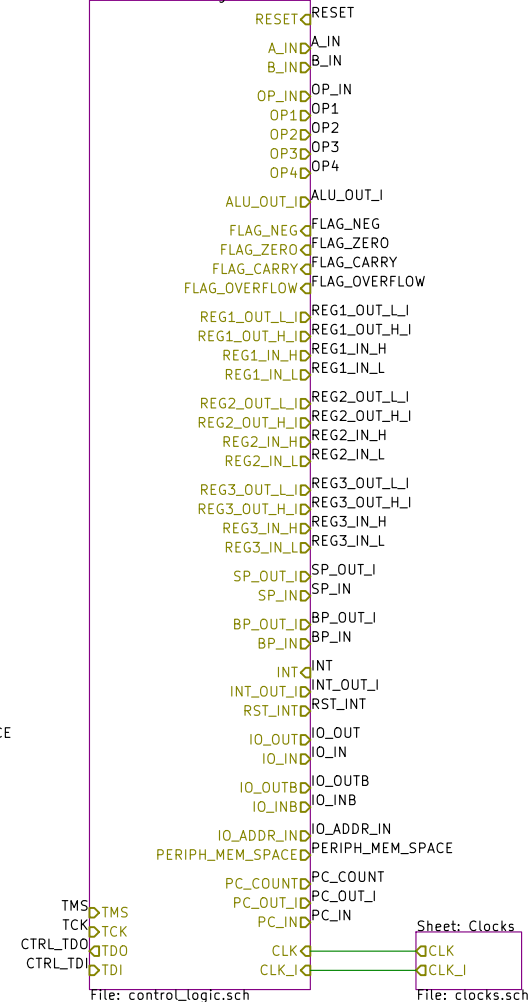
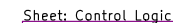
File: registers.sch



File: program\_counter.sch



File: io.sch



File: control\_logic.sch

Sheet: Clocks

cchaine

Sheet: /

File: computer-board.sch

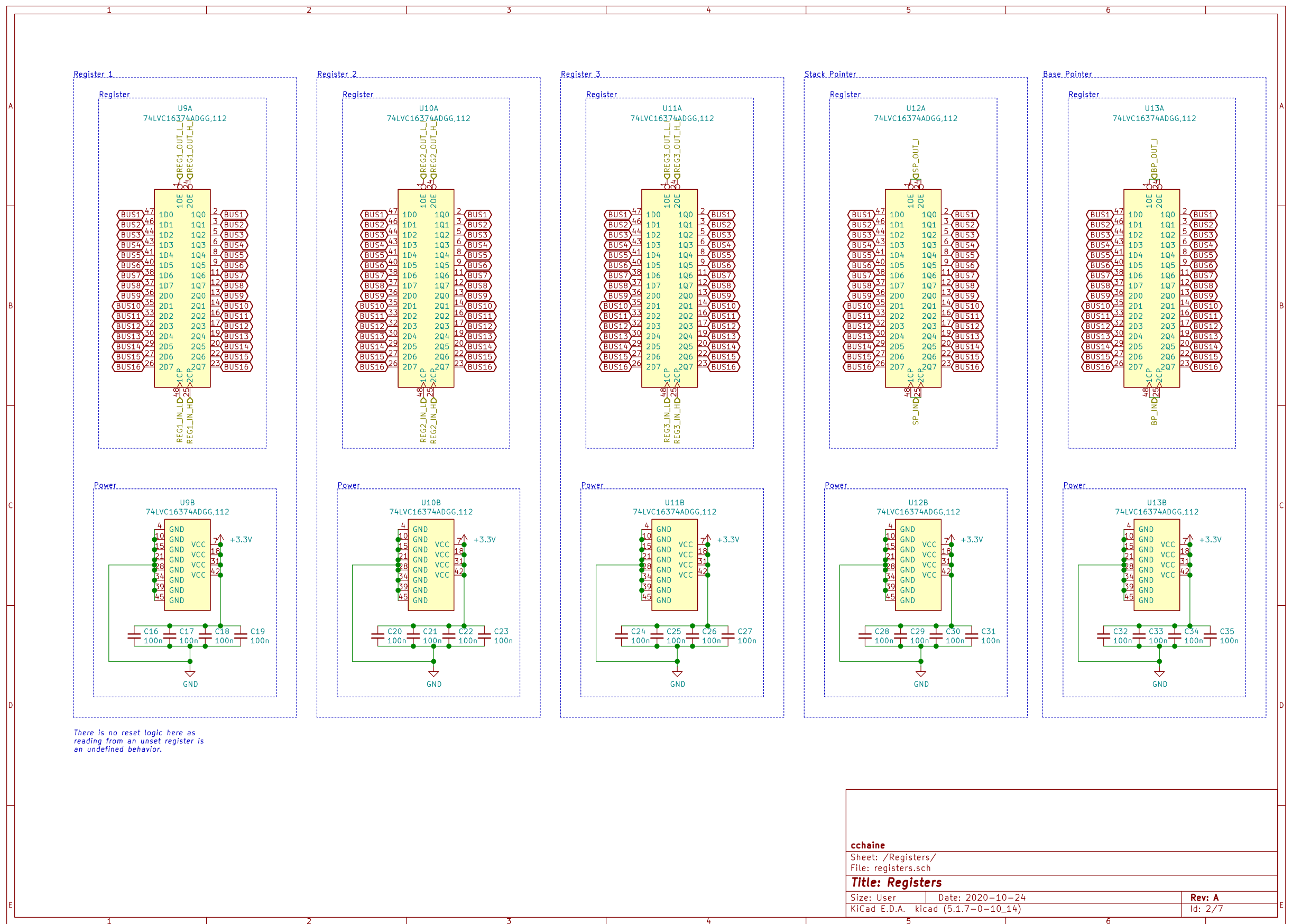
**Title:** Computer Board

Size: User	Date: 2020-10-17
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Size: 3.5K	Date: 2020-10-1
KiCad E.D.A. kicad (5.1.7-0-10_14)	

Rev: Rev 1

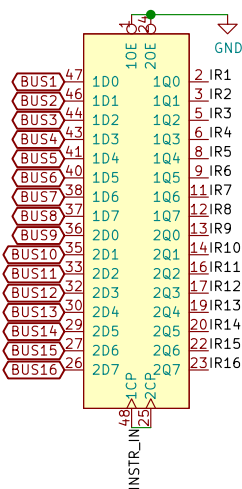
Id: 1/7



# Instruction register

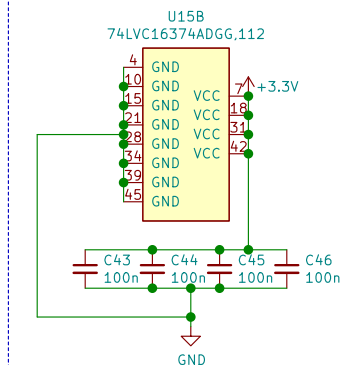
## Register

U15A  
74LVC16374ADGG,112

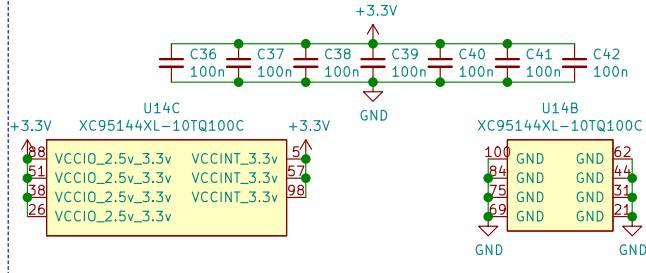


The instruction register is always outputting its content to the control logic

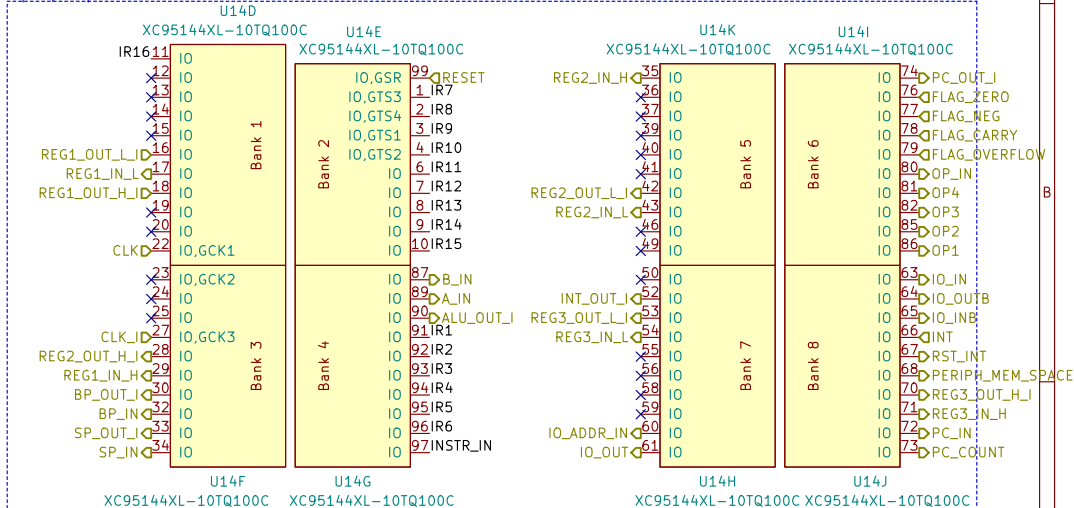
## Power



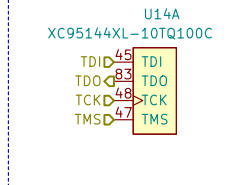
## Power



# Inputs/Outputs



## JTAG



## cchaine

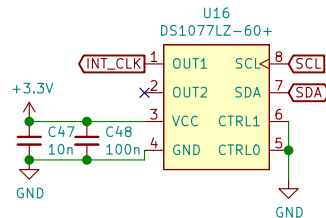
Sheet: /Control Logic/  
File: control\_logic.sch

## Title: Control logic

Size: User Date: 2020-11-10  
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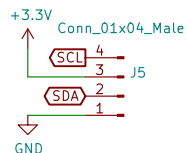
Rev: Rev A  
Id: 3/7

### Clock generation

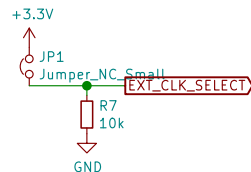


CTRL0 and CTRL1 are tied to GND because we don't care about the power-down feature

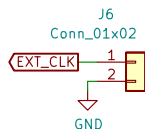
### I2C Interface



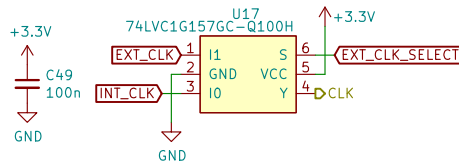
### External clock selection



### External clock connector

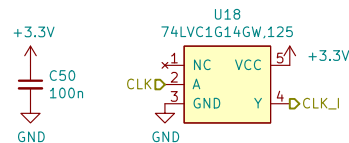


### Clock selection



The clock inversion happens locally

### Clock inversion



Sheet: /Clocks/  
File: clocks.sch

### Title:

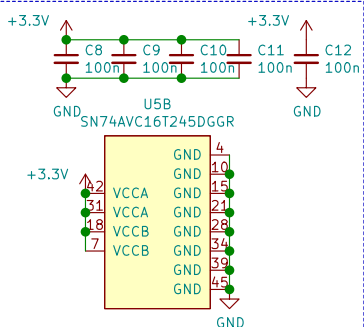
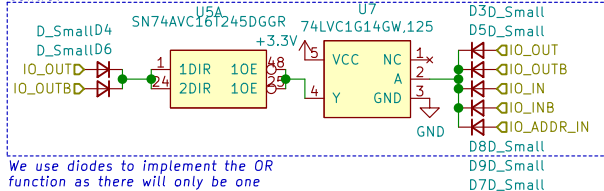
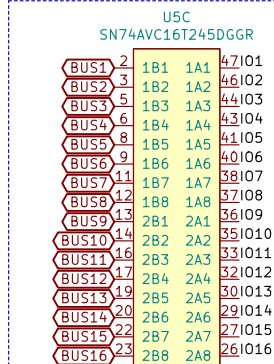
Size: User

Date:

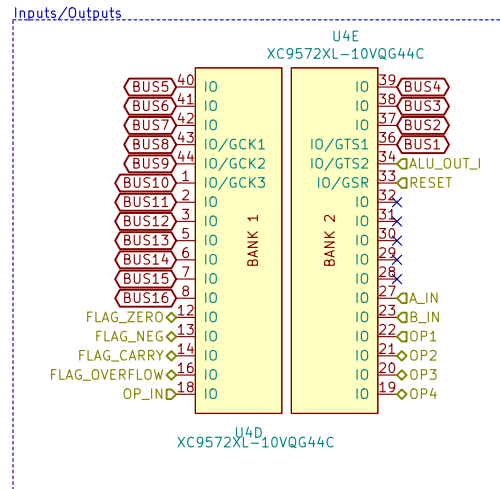
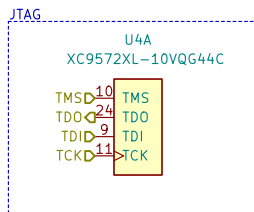
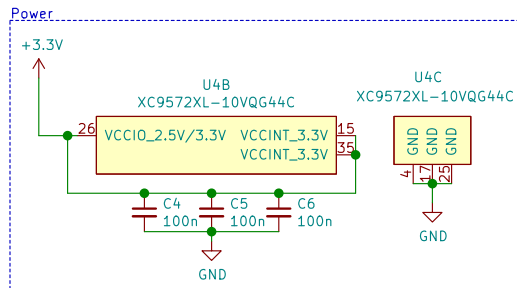
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Rev:

Id: 4/7

[illegible]

Id: 5/7



ALU\_OUT\_I is wired to the GTS1 to provide minimum skew to most macrocells

RESET is wired to GSR to provide minimum skew to most macrocells

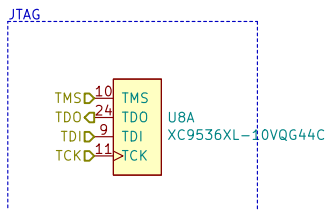
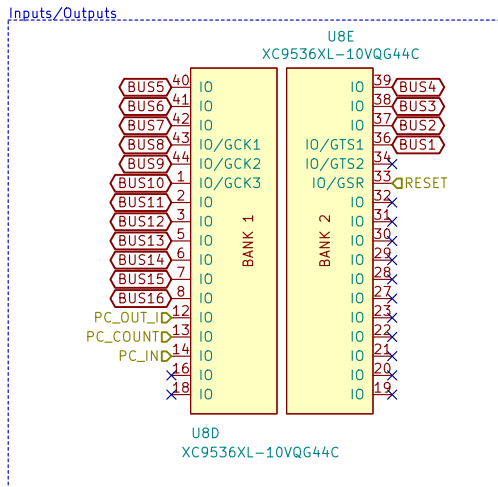
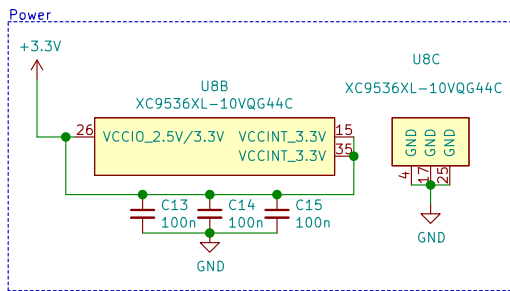
**cchaine**

Sheet: /Arithmetic and Logic Unit/  
File: alu.sch

**Title: Arithmetic and Logic Unit**

Size: User Date: 2020-10-24  
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**Rev: A**  
Id: 6/7



The program counter has to be a CPLD as there is no 16-bit presettable synchronous tri-state binary counter with asynchronous reset available on the market

cchaine

Sheet: /Program Counter/  
File: program\_counter.sch

**Title: Program Counter**

Size: User	Date: 2020-10-26
KiCad E.D.A. kicad (5.1.7-0-10_14)	

Rev: A

REV. A  
Id: 7/7