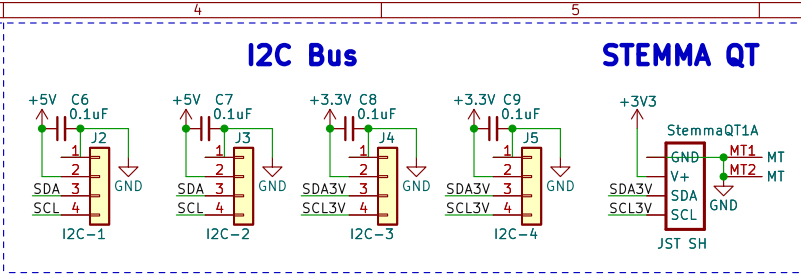
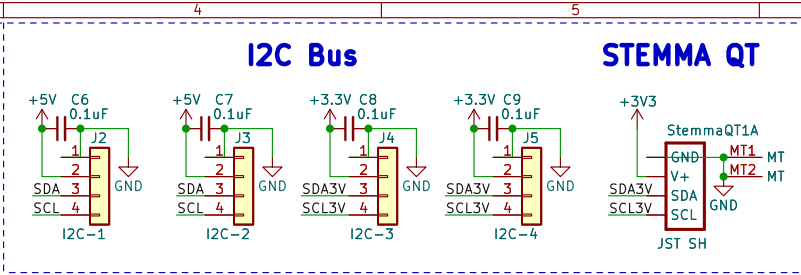
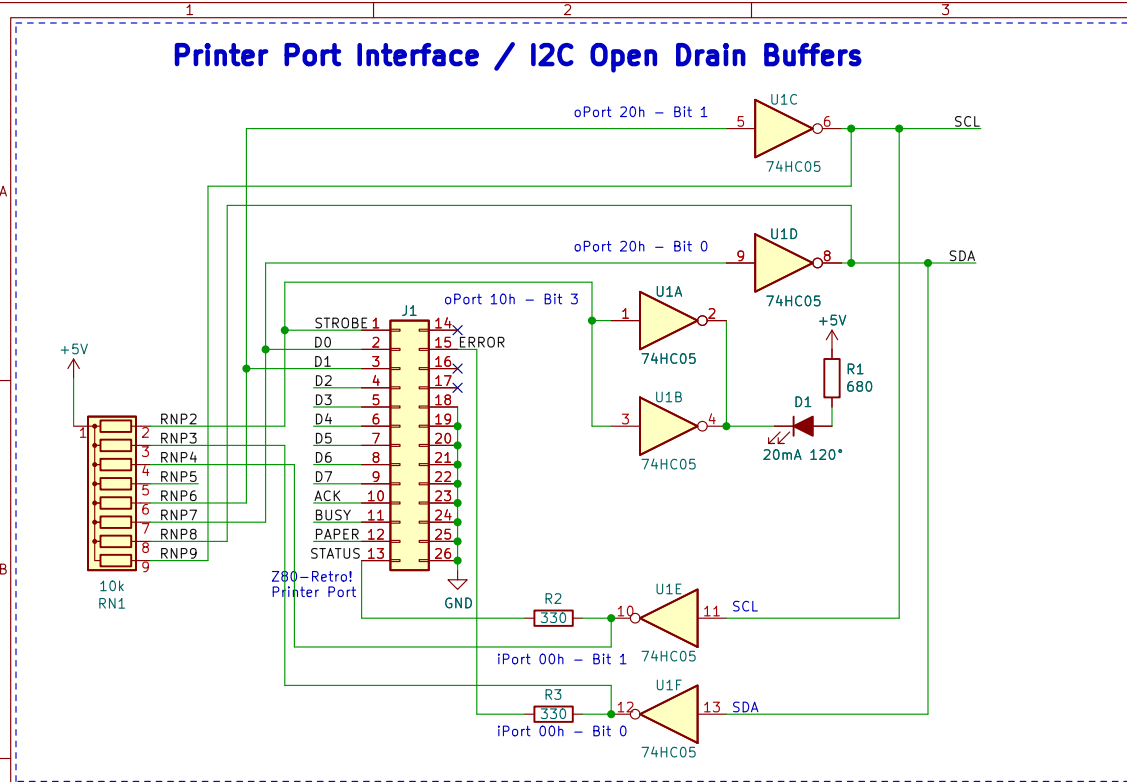


### Printer Port Interface / I2C Open Drain Buffers

The diagram illustrates a circuit for interfacing a Z80-Retro! Printer Port to an I2C bus using open-drain buffers. The printer port is connected to a 5V supply and a 10k resistor (RN1). The printer port pins are connected to various logic components: STROBE to U1C (74HC05) and U1D (74HC05); D0-D7 to U1A (74HC05) and U1B (74HC05); ACK to U1E (74HC05) and U1F (74HC05); BUSY to U1A (74HC05) and U1B (74HC05); PAPER to U1A (74HC05) and U1B (74HC05); STATUS to U1A (74HC05) and U1B (74HC05). The output of U1C is labeled 'oPort 20h - Bit 1' and the output of U1D is labeled 'oPort 20h - Bit 0'. The output of U1E is labeled 'iPort 00h - Bit 1' and the output of U1F is labeled 'iPort 00h - Bit 0'. The circuit also includes a 5V supply, a 10k resistor (RN1), a 680 ohm resistor (R1), and a 20mA 120V diode (D1).



## SPI Bus

The diagram illustrates four SPI bus connections (SPI-1, SPI-2, SPI-3, SPI-4) and a pin list for EyeSPI1.

**SPI-1:** 5V C10 0.1uF, J6, MISO 3, MOSI 4, SCLK 5, CS1 6, GND.

**SPI-2:** 5V C11 0.1uF, J7, MISO 3, MOSI 4, SCLK 5, CS2 6, GND.

**SPI-3:** 3.3V C12 0.1uF, J8, MISO3V 3, MOSI3V 4, SCLK3V 5, CS3-3V 6, GND.

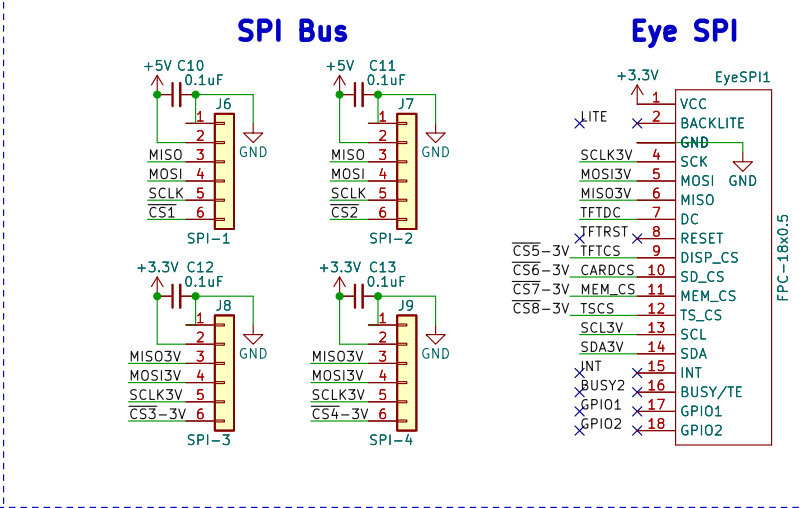
**SPI-4:** 3.3V C13 0.1uF, J9, MISO3V 3, MOSI3V 4, SCLK3V 5, CS4-3V 6, GND.

**EyeSPI1 Pin List:**

- VCC
- BACKLITE
- GND
- SCK
- MOSI
- MISO
- DC
- RESET
- DISP\_CS
- SD\_CS
- MEM\_CS
- TS\_CS
- SCL
- SDA
- INT
- BUSY/TE
- GPIO2
- GPIO2

Additional labels: LITE, TFIRST, CS5-3V, CS6-3V, CS7-3V, CS8-3V, SCL3V, SDA3V, NT, BUSY2, GPIO1, GPIO2.

FP-18x0.5



## SPI Bus

The diagram illustrates four SPI bus connections (SPI-1, SPI-2, SPI-3, SPI-4) and a pin list for EyeSPI1.

**SPI-1:** 5V C10 0.1uF, J6, MISO 3, MOSI 4, SCLK 5, CS1 6, GND.

**SPI-2:** 5V C11 0.1uF, J7, MISO 3, MOSI 4, SCLK 5, CS2 6, GND.

**SPI-3:** 3.3V C12 0.1uF, J8, MISO3V 3, MOSI3V 4, SCLK3V 5, CS3-3V 6, GND.

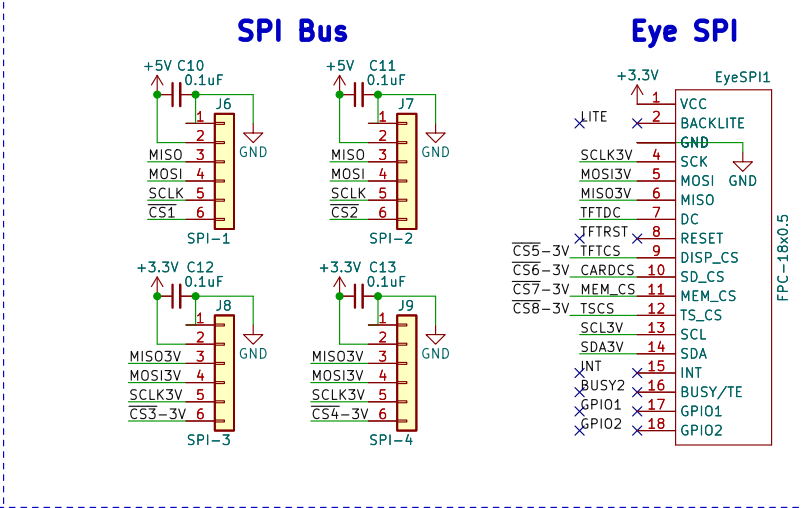
**SPI-4:** 3.3V C13 0.1uF, J9, MISO3V 3, MOSI3V 4, SCLK3V 5, CS4-3V 6, GND.

**EyeSPI1 Pin List:**

- VCC
- BACKLITE
- GND
- SCK
- MOSI
- MISO
- DC
- RESET
- DISP\_CS
- SD\_CS
- MEM\_CS
- TS\_CS
- SCL
- SDA
- INT
- BUSY/TE
- GPIO2
- GPIO2

Additional labels: LITE, TFIRST, CS5-3V, CS6-3V, CS7-3V, CS8-3V, SCL3V, SDA3V, NT, BUSY2, GPIO1, GPIO2.

FP-18x0.5



## Data Line Level Shifters

### I2C Bus

Q1  
BSS138

Q2  
BSS138

### SPI Bus

Q3  
BSS138

Q4  
BSS138

Q5  
BSS138

R21 R27

R23 R29

R25 R31

R22 R28

R24 R30

R26 R32

## Data Line Level Shifters

### I2C Bus

Q1  
BSS138

Q2  
BSS138

### SPI Bus

Q3  
BSS138

Q4  
BSS138

Q5  
BSS138

R21 R27

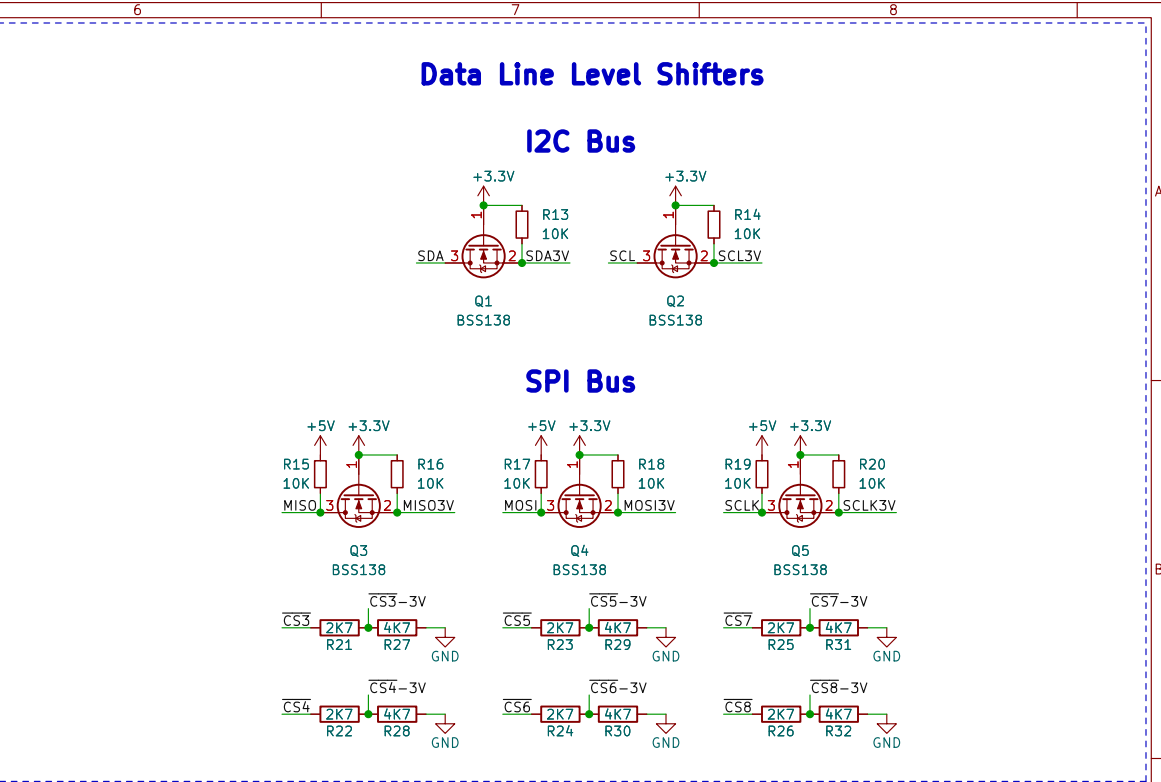
R23 R29

R25 R31

R22 R28

R24 R30

R26 R32



## Data Line Level Shifters

### I2C Bus

Q1  
BSS138

Q2  
BSS138

### SPI Bus

Q3  
BSS138

Q4  
BSS138

Q5  
BSS138

R21 R27

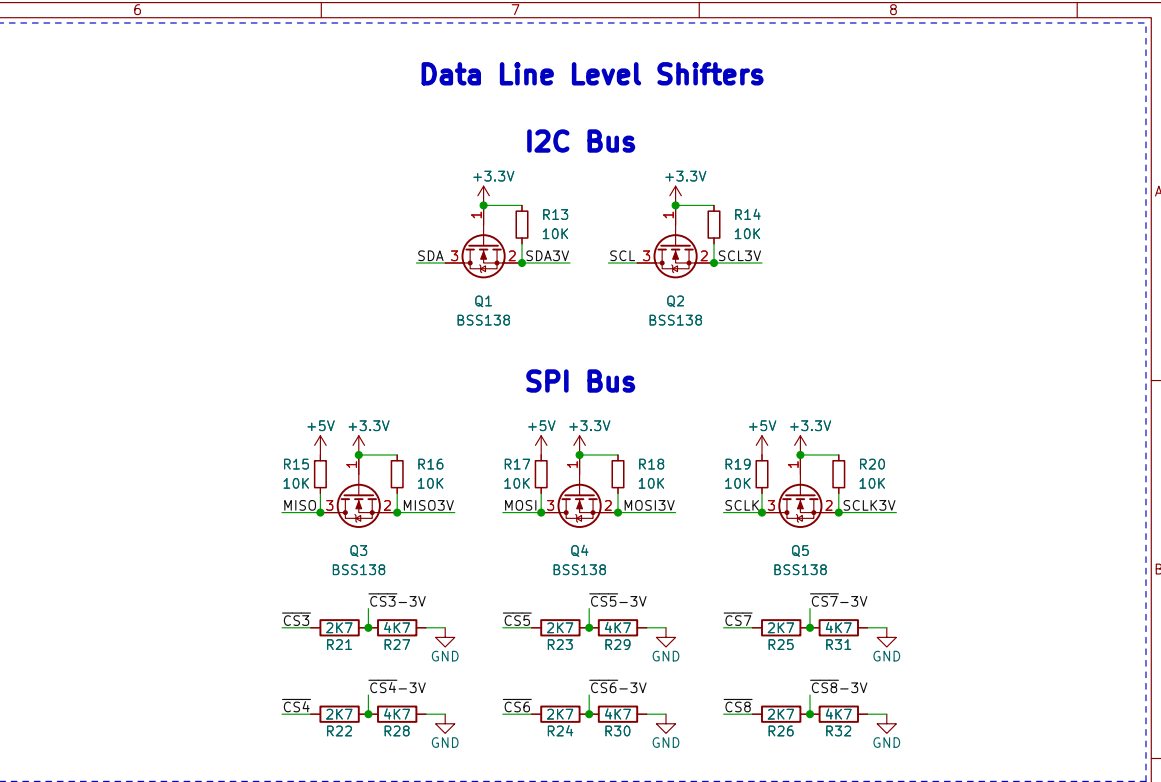
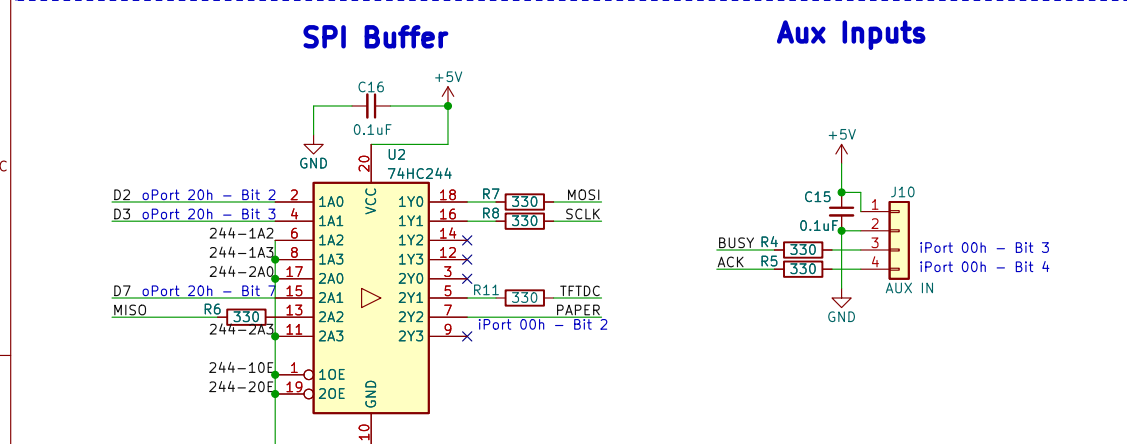
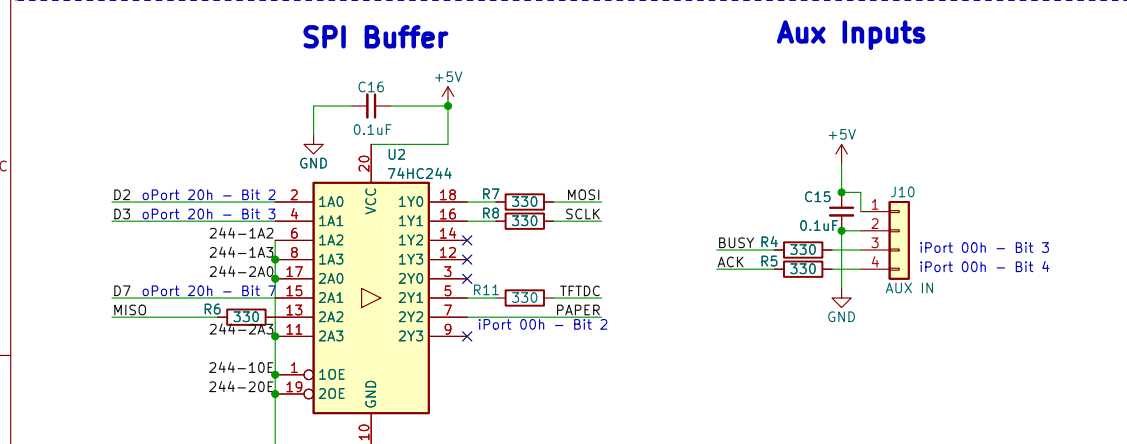
R23 R29

R25 R31

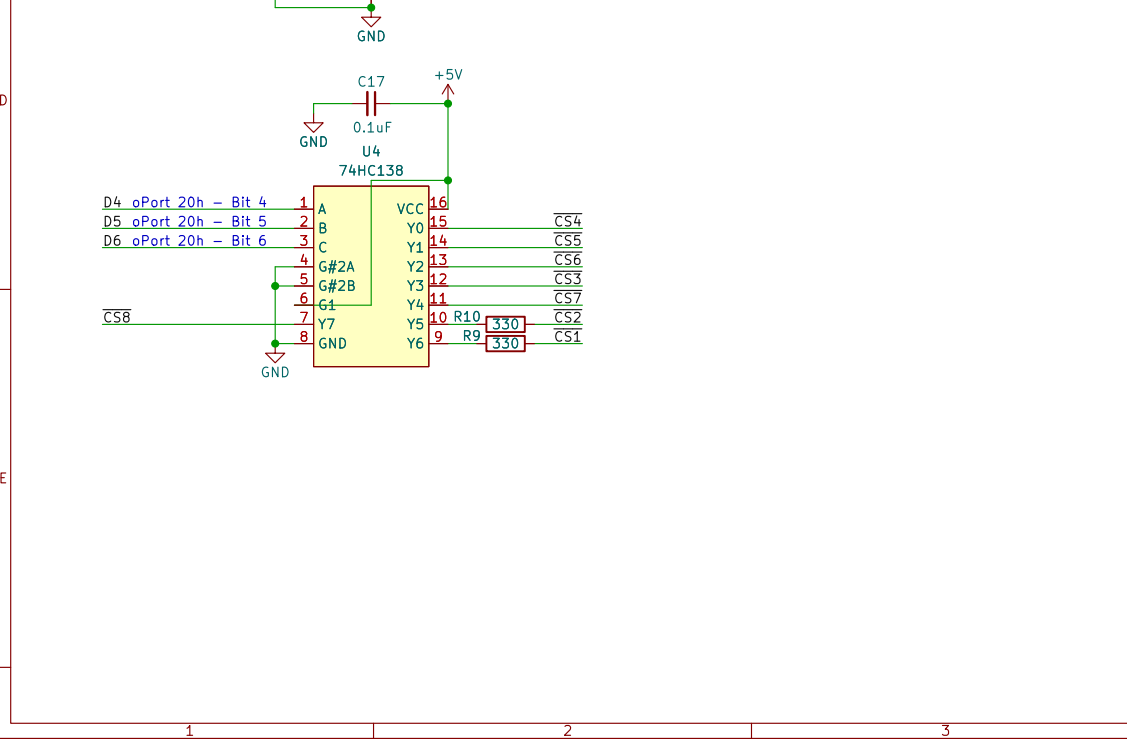
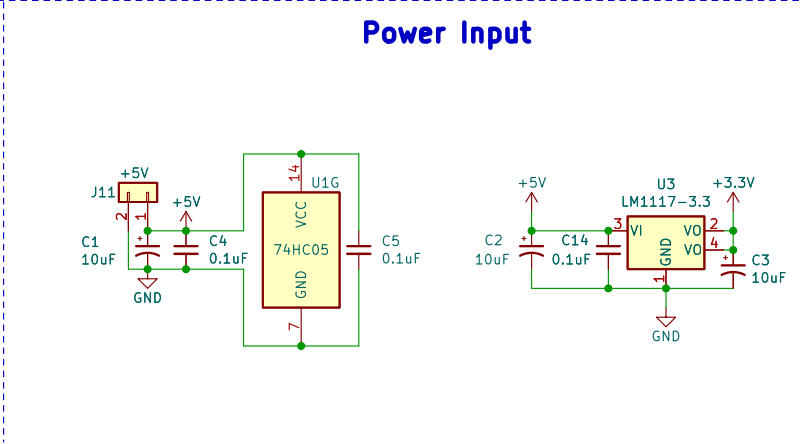
R22 R28

R24 R30

R26 R32

[illegible][illegible]

## Power Input



<b>KRSynthWorx</b> Sheet: / File: i2c—adapter.kicad_sch	
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KiCad E.D.A. kicad 6.0.11-2627ca5db0-126-ubuntu22.04.1	Rev: 2.1 Id: 1/1

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