

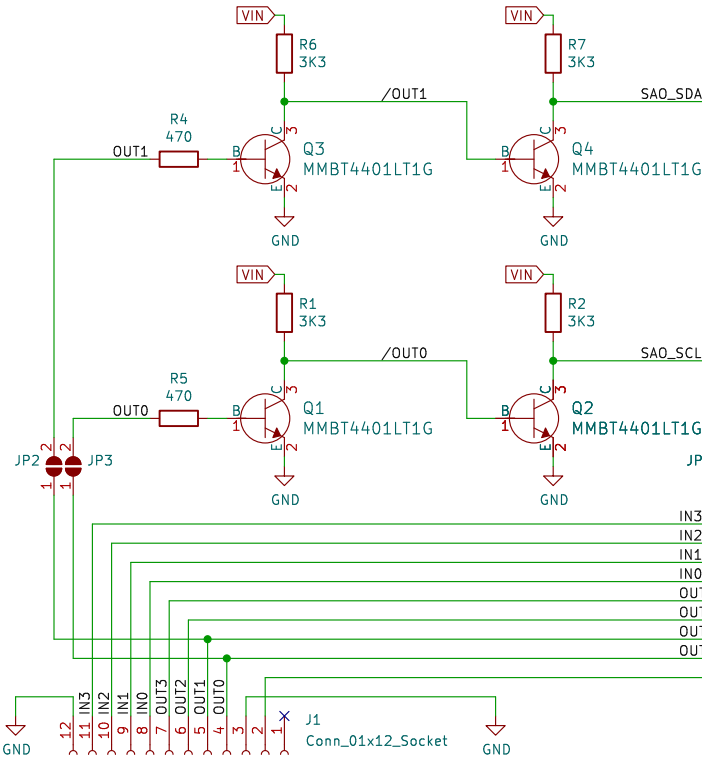
# SAO VOJA4 ADAPTER (with SPI!)

## GPIO TO I2C CONVERTER

Voja4 set OUTx HIGH when not in use for tri-state mode.  
Voja4 set OUT0 LOW to assert I2C line low.

1st NPN is ON. /OUT is LOW.  
1st NPN is OFF. /OUT is HIGH.

2nd NPN is OFF. I2C line is floating HIGH.  
2nd NPN is ON. I2C line is asserted LOW.

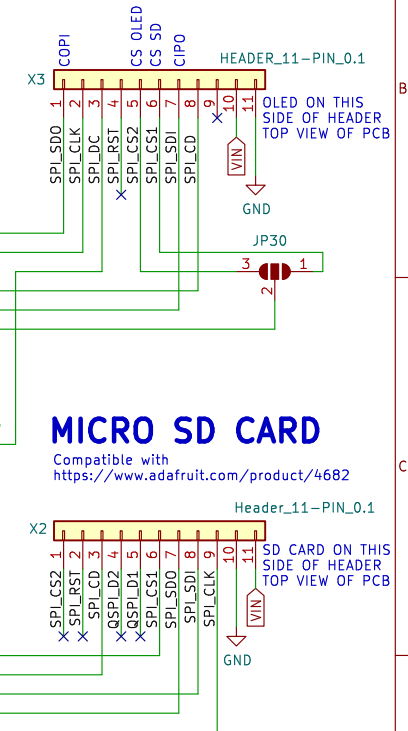


## SAO, I2C, QWIIC

<https://hackaday.io/project/175182-simple-add-ons-sao>  
using Sullins SFH11-NBPC-D03-ST-BK female header  
<https://www.digikey.com/product-detail/en/sullins-connector-solutions/SFH11-NBPC-D03-ST-BK/S9717-ND/4558818>

## OLED COLOR SPI W/MICRO SD

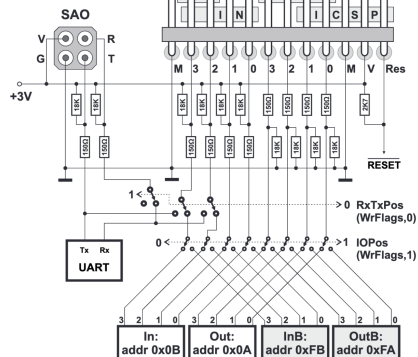
Compatible: <https://www.adafruit.com/product/1431>  
1.5" 128x128, 16-bit color w/MicroSD holder



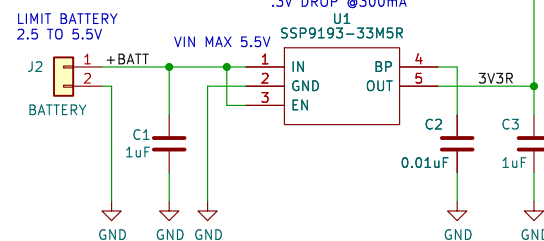
## MICRO SD CARD

Compatible with  
<https://www.adafruit.com/product/4682>

## BADGE



## ALTERNATE 3V3 REGULATOR



L1  
Machine Ideas Logo

All non-polarized capacitors are X7R or X5R ceramic unless otherwise noted.  
Designed by: Andy G., Koppany H.

**Draft 10/21/2024**  
**2200 CDT**

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