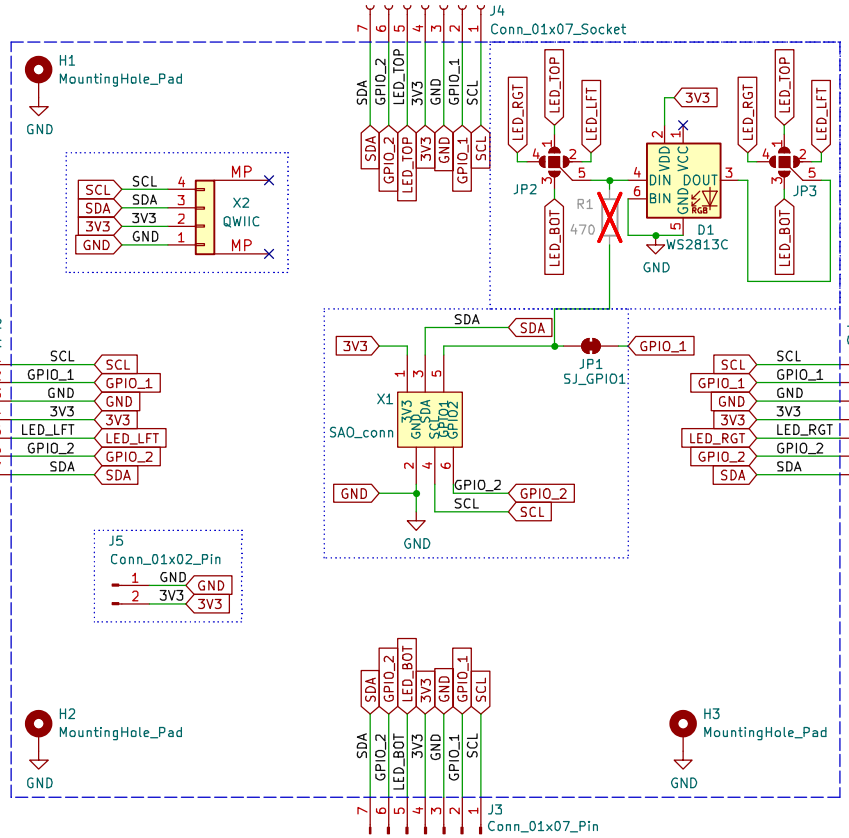
SAOfinity V1

TOP/FRONT VIEW



QWIIC PORT (OPTIONAL)

QWIIC SOCKET
Manufacturer: JST SM04B-SRSS-TB
Digikey: 455-SM04B-SRSS-TBTR-ND
LCSC: C160404

RGB LED (OPTIONAL)

SIGNAL SOURCE CONFIG:
1) Install WS2813C or similar.
2) Cut open JP1 or do not connect at perimeter of PCB.
3) Install R1.
4) Signal input: GPIO1 on SAO port.
5) Signal output: close one pad set of JP3.

INLINE CONFIG
1) Install WS2813C or similar.
2) Signal input: close one pad set of JP2.
5) Signal output: close one pad set of JP3.

POWER INPUT (AT LEAST ONE)

2-PIN 0.1 inch (2.54mm) header
+ 3.3VDC
- GROUND

SEVEN PIN PINOUT (# is priority/liklihood of use)
Primary pins are in center, less likely used pins fan outward.

1) GND and 3V3 are primarily used connections.

2) LED is most likely optional connection.
3) GPIOs could be shared between SAOs. Maybe.
4) SDA/SCL are least likely to route between grid squares due to complexity of I2C interactions amongst SAOs.

COMMON I2C ADDRESSES

OLED (SSD1306) 128x32	0x3C
OLED (SSD1306) 128x64	0x3D
OLED (SSD1327) 128x128	0x3C

SAO PORT

SAO BADGE/HOST SOCKET
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

SAO STANDARDS

PRIMARY: https://docs.google.com/document/d/1EJqvkkLMAPsQ9VWF5A4elWoiOqMlKyr5Giw5rqRmtnM/edit?usp=sharing
SUPPLEMENT: https://hackaday.io/project/175182-simple-add-ons-sao

L1
Machine Ideas Logo

All non-polarized capacitors are X7R or X5R ceramic unless otherwise noted.

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In collaboration with Jeremy Geppert

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Size: A	Date: 2025-09-22	**Rev: 1.0**
KiCad E.D.A. 8.0.8		Id: 1/1