

Sheet: ESP32

File: ESP32.sch

Sheet: POWER

File: POWER.sch

Sheet: USB

File: USB.sch

Sheet: SD

File: SD.sch

Sheet: ENDSTOP

File: ENDSTOP.sch

Sheet: MOSFET

File: MOSFET.sch

Sheet: P-AUX

File: P-AUX.sch

Sheet: DRIVE

File: DRIVE.sch

FID1  
Fiducial

FID2  
Fiducial

FID3  
Fiducial

M1

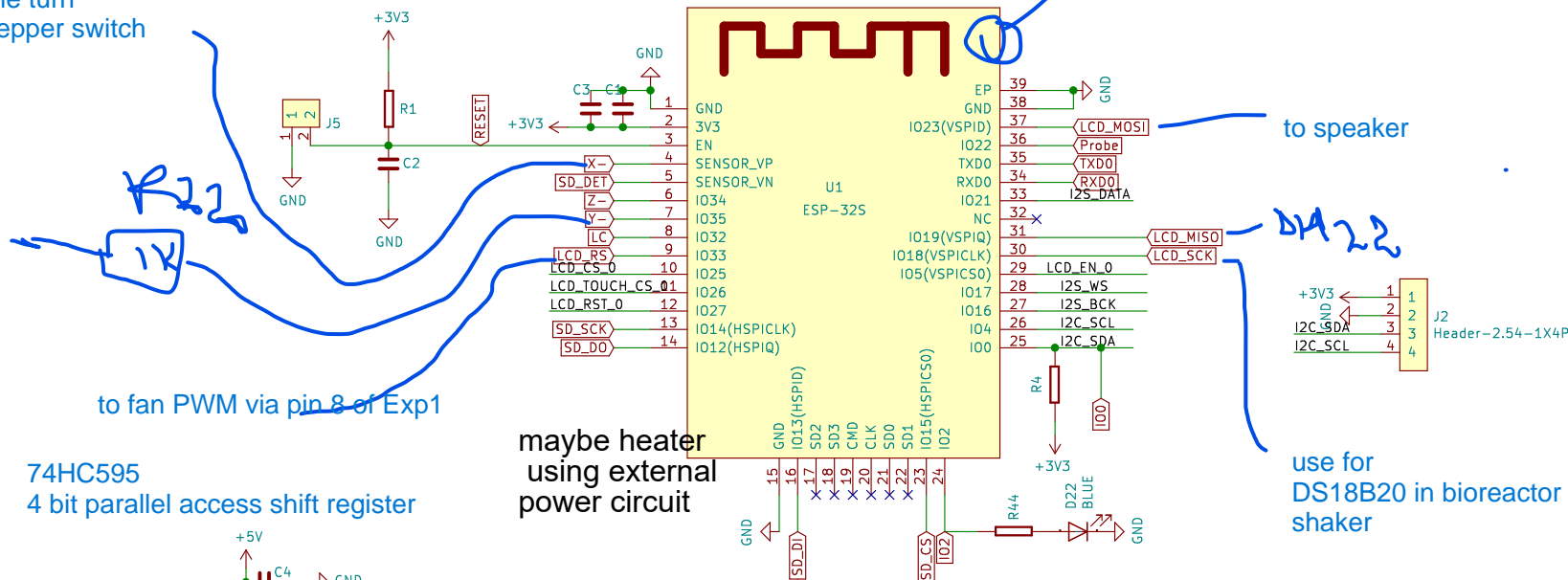
M2

M3  
M-HOLES

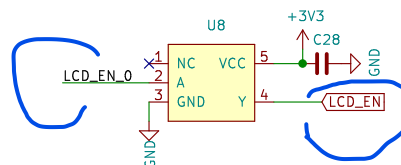
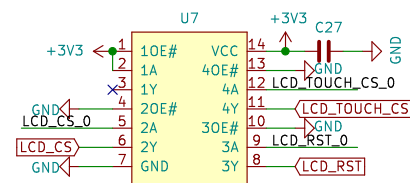
M4  
M-HOLES

M5  
M-HOLES

M6  
M-HOLES



The diagram shows the I2S interface for the U3 module. The module is connected to a +5V supply and GND. The I2S\_DATA signal is connected to pin 14 (SER), I2S\_BCK to pin 11 (SRCLK), and I2S\_WS to pin 12 (RCLK). The module's VCC (pin 16) is connected to +5V through a capacitor C4, and its GND (pin 8) is connected to GND. The module's outputs are connected to the XYZ\_EN, X\_STEP, X\_DIR, Z\_STEP, Z\_DIR, Y\_STEP, Y\_DIR, and BEEPER signals.

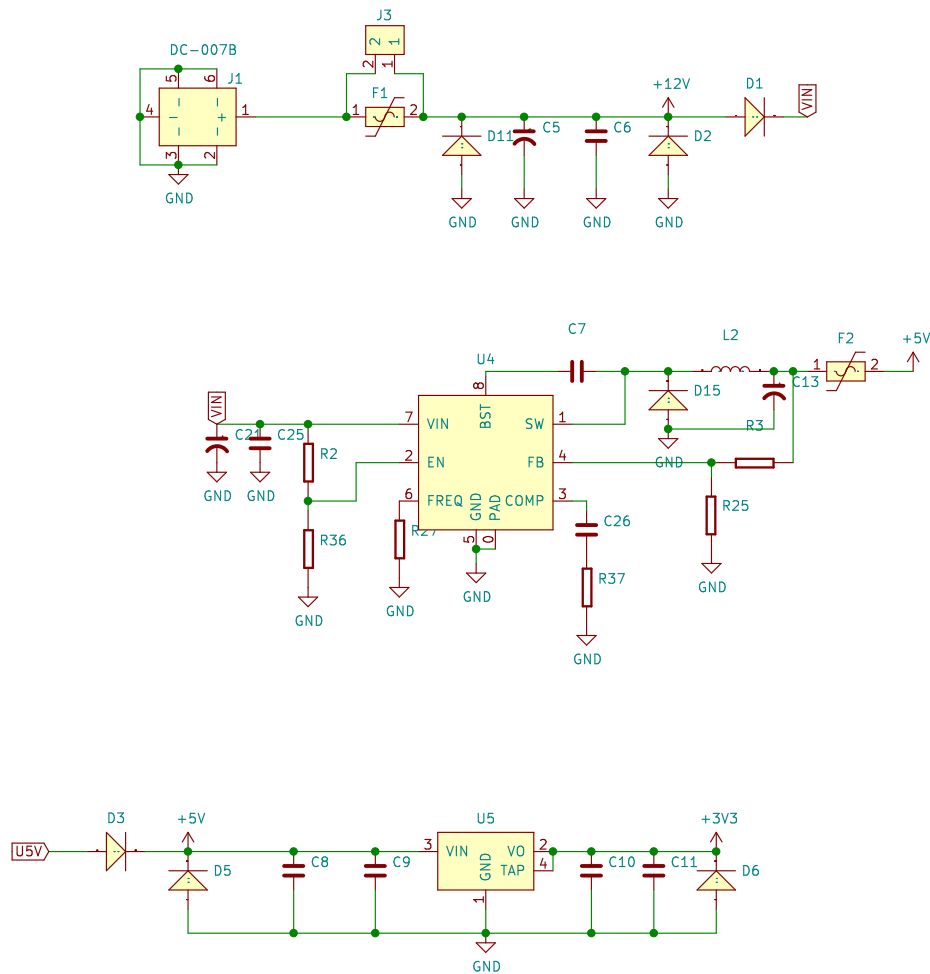


looks like ESP32S3WROOM-1U  
[https://www.espressif.com/sites/default/files/documentation/esp32-s3-wroom-1\\_wroom-1u\\_datasheet\\_en.pdf](https://www.espressif.com/sites/default/files/documentation/esp32-s3-wroom-1_wroom-1u_datasheet_en.pdf)

- to speaker

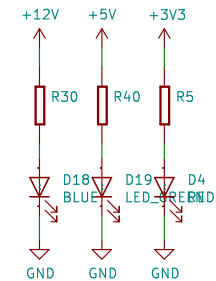
DA 22

use for  
DS18B20 in bioreactor and for speaker in Orbital  
shaker



+12V ← 2 2 XH2.54-2P  
GND ← 1 1 J13

+12V ← 2 2 XH2.54-2P  
GND ← 1 1 J6



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Sheet: /POWER/  
File: POWER.sch

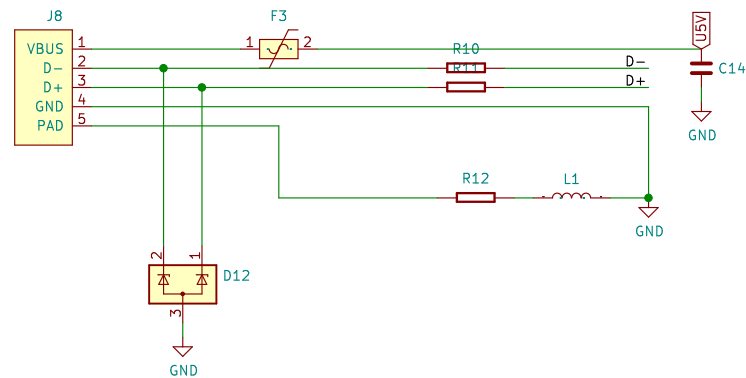
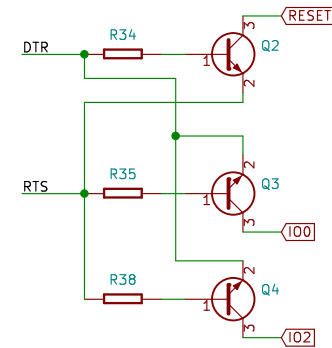
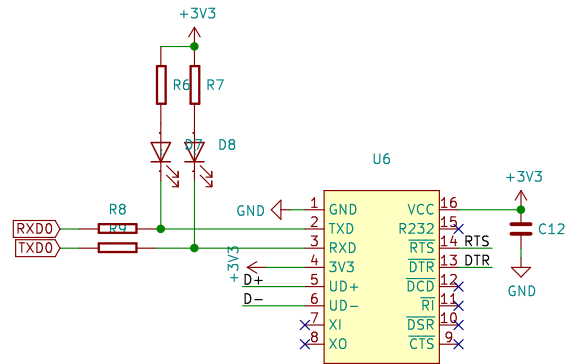
**Title: MKS DLC32**

Size: A4 Date: 2021-10-15

KiCad E.D.A. kicad (5.1.4)-1

**Rev: V2.0\_001**

Id: 3/9



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**Makerbase**

Sheet: /USB/  
 File: USB.sch

**Title: MKS DLC32**

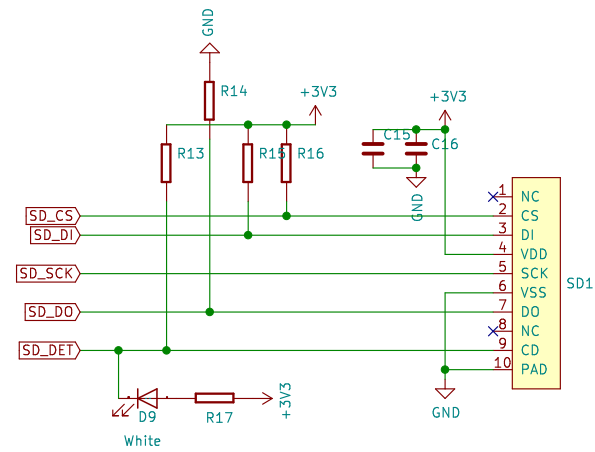
Size: A4 Date: 2021-10-15

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Memory card?



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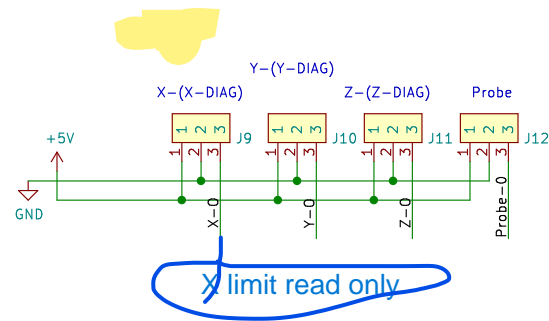


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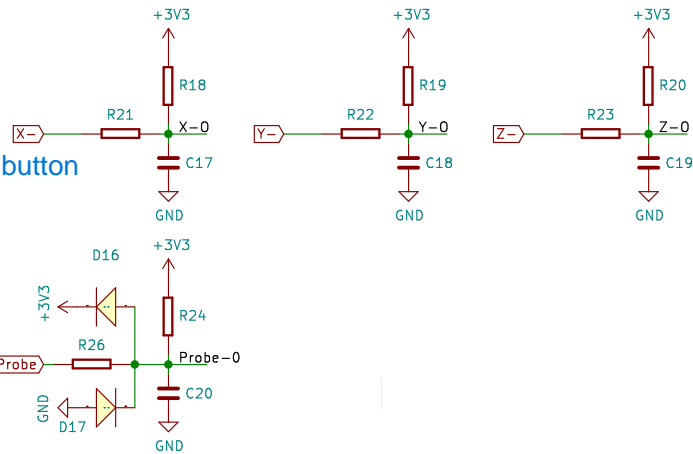
**Title: MKS DLC32**

Size: A4 Date: 2021-10-15  
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 Id: 5/9



used for the  
stepper turn on/off button



used for  
STEPPER\_PWM\_STEP\_PIN

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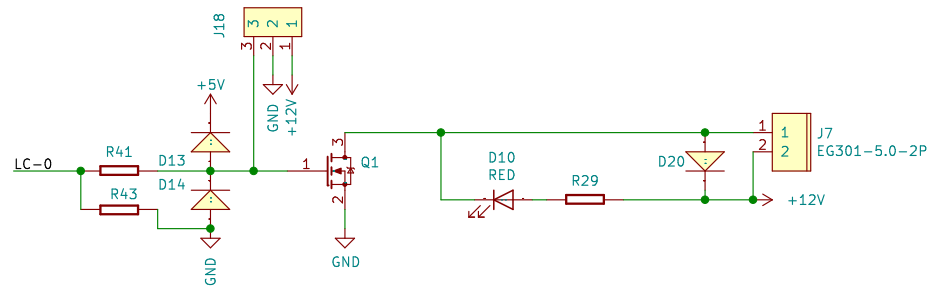
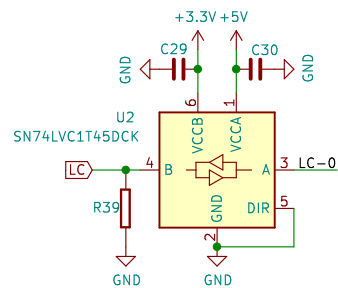
Sheet: /ENDSTOP/  
File: ENDSTOP.sch

**Title: MKS DLC32**

Size: A4 Date: 2021-10-15  
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POWER??



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**Makerbase**

Sheet: /MOSFET/  
File: MOSFET.sch

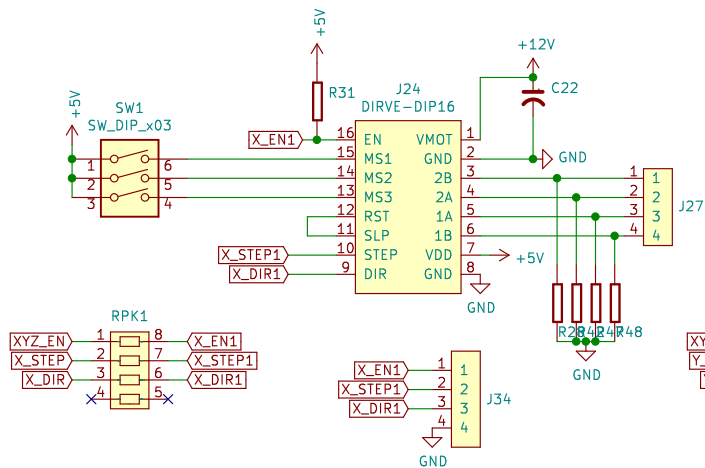
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Size: A4 Date: 2021-10-15

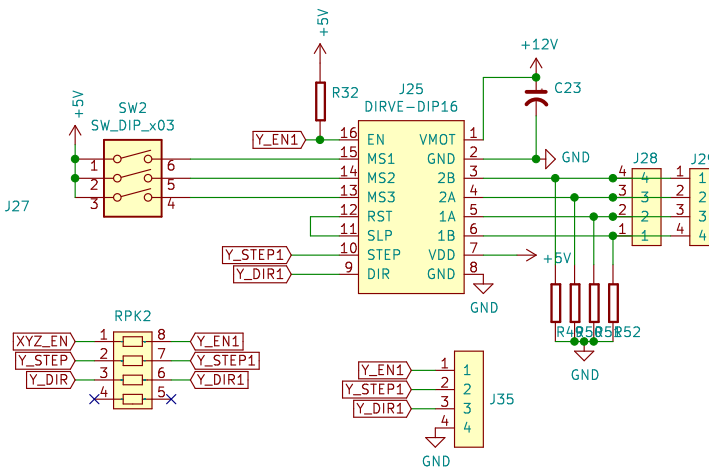
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**Rev: V2.0\_001**

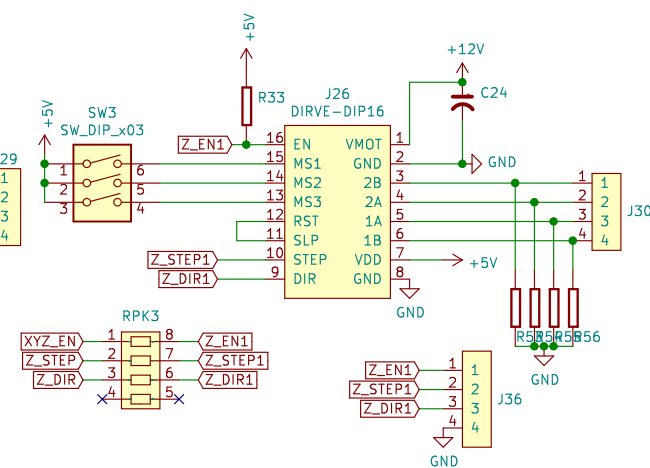
Id: 7/9



Motor X



Motor Y



Motor Z

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**Makerbase**

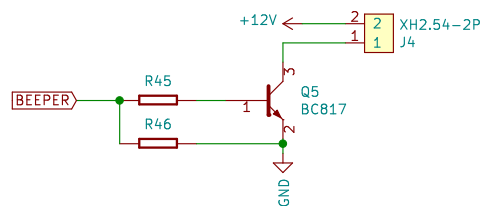
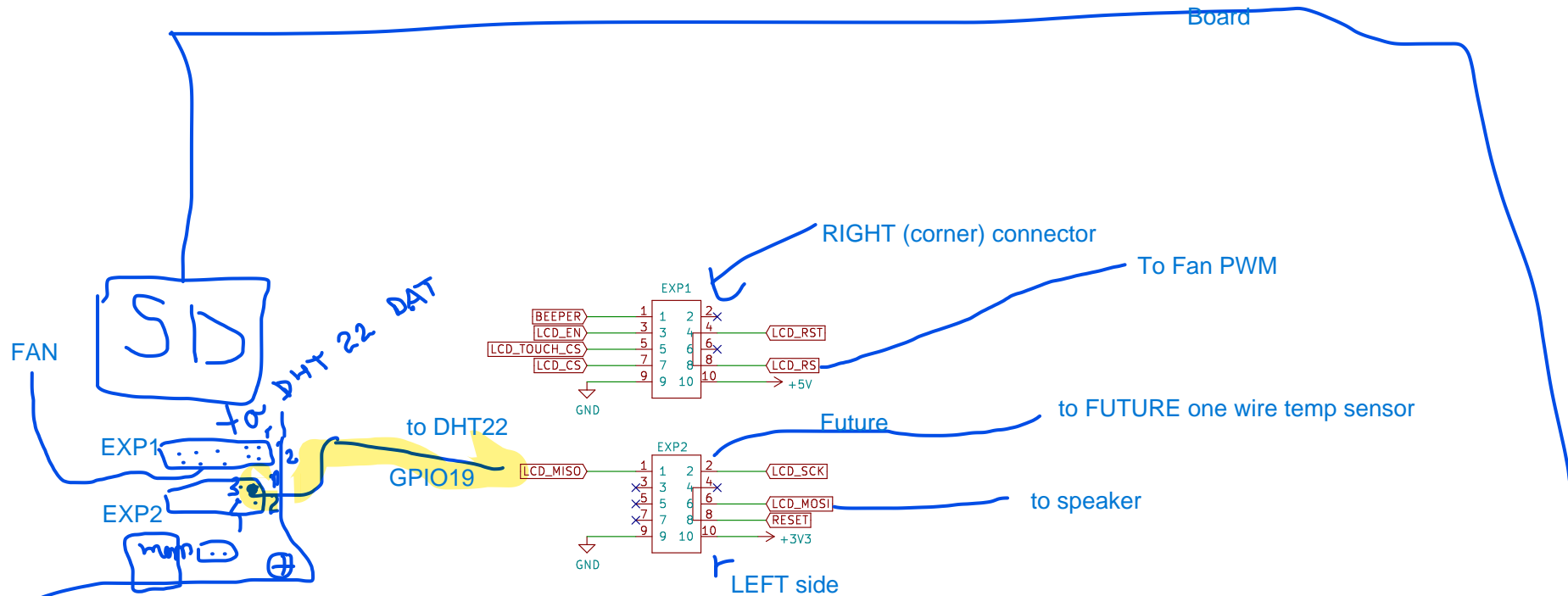
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File: DRIVE.sch

**Title: MKS DLC32**

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Sheet: /P-AUX/  
 File: P-AUX.sch

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Size: A4 Date: 2021-10-15  
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**Rev: V2.0\_001**  
 Id: 9/9