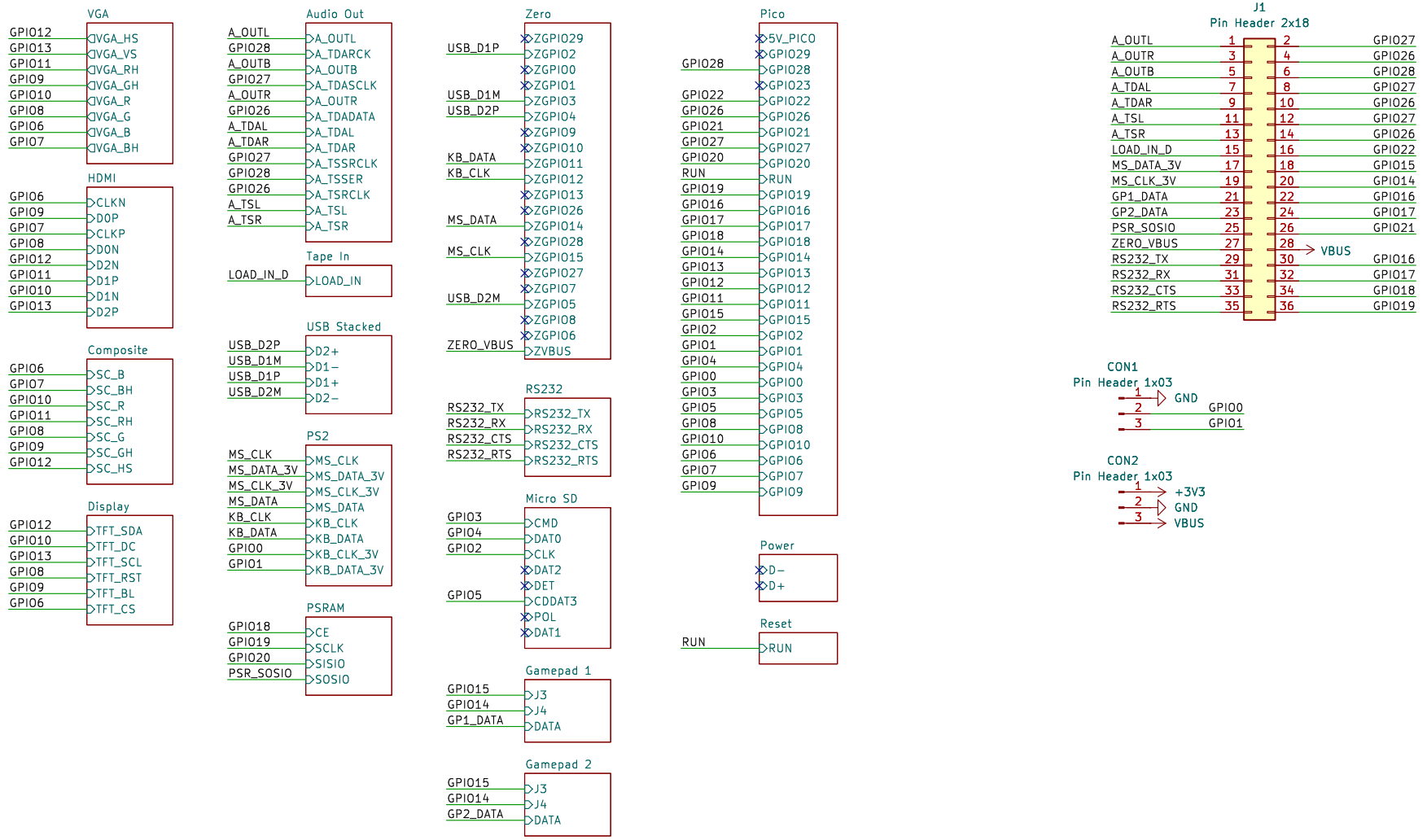


https://github.com/xtremespb/frank

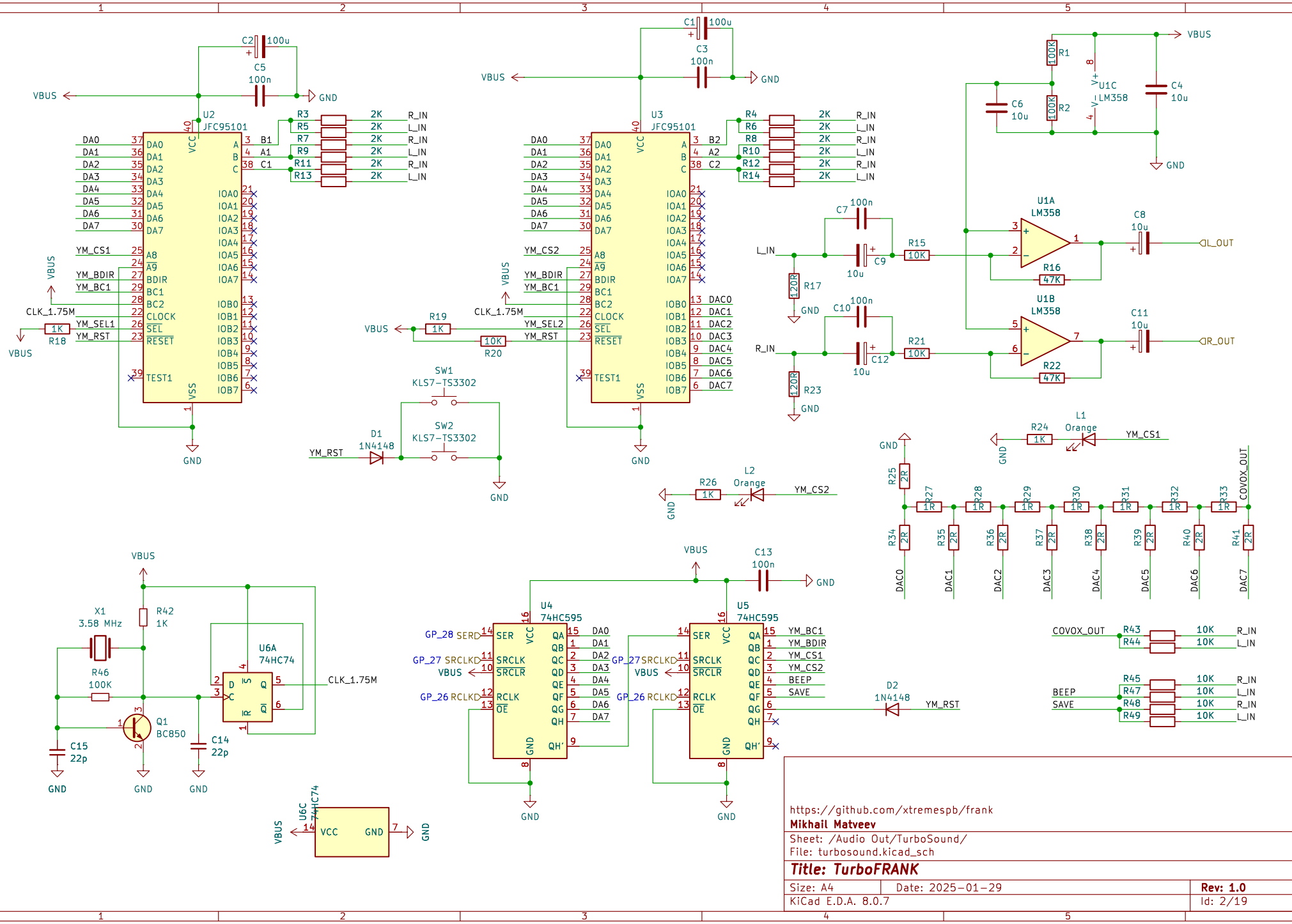
Mikhail Matveev

Sheet: /

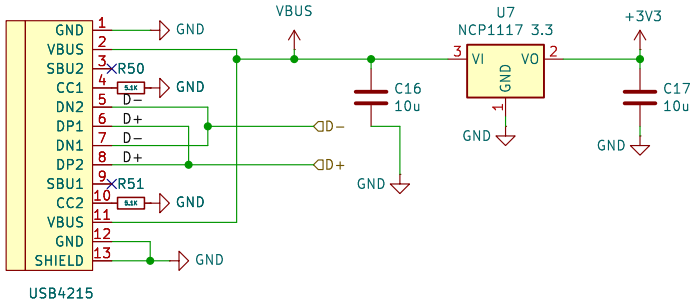
File: turbofrank.kicad_sch

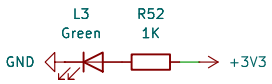
Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 1/19


U2
JFC95101
U3
JFC95101
U1A
LM358
U1B
LM358
U1C
LM358
U4
74HC595
U5
74HC595
U6A
74HC74
U6C
74HC74
VBUS
GND
CLK_1.75M
YM_CS1
YM_CS2
YM_BDIR
YM_BC1
YM_SEL1
YM_SEL2
YM_RST
L_IN
R_IN
L_OUT
R_OUT
COVOX_OUT
BEEP
SAVE
SW1
KLS7-TS3302
SW2
KLS7-TS3302
D1
1N4148
D2
1N4148
L1
Orange
L2
Orange
X1
3.58 MHz
Q1
BC850
https://github.com/xtremespb/frank
Mikhail Matveev
Sheet: /Audio Out/TurboSound/
File: turbosound.kicad_sch
Title: TurboFRANK
Size: A4
Date: 2025-01-29
Rev: 1.0
KiCad E.D.A. 8.0.7
Id: 2/19

The power source is USB-C connector.
The NCP1117 transforms +5V to +3V3.





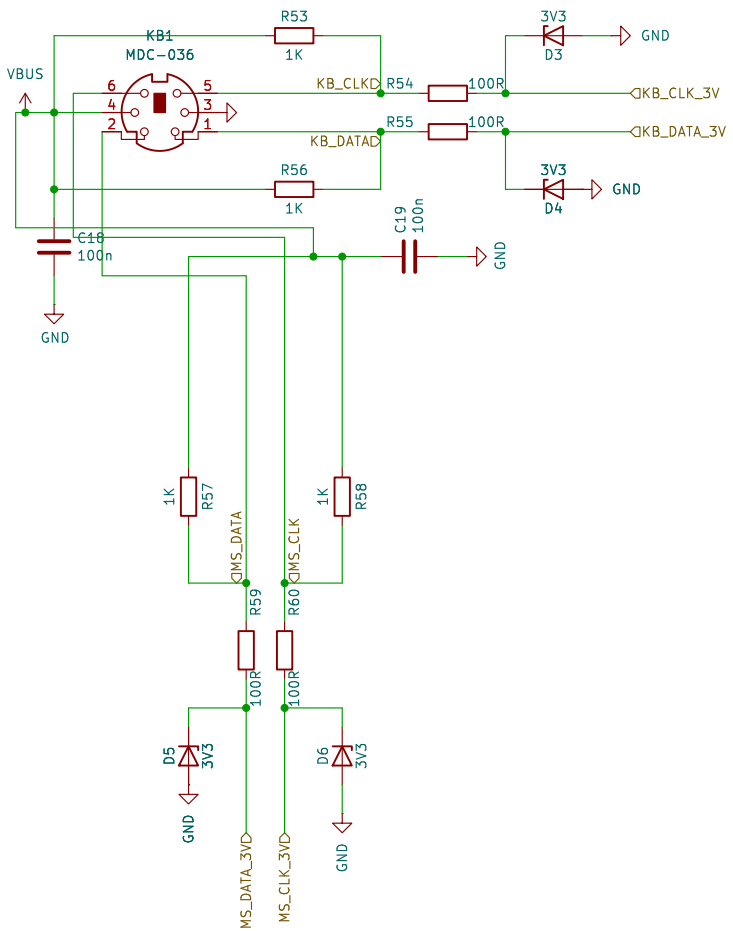
The LED indicates +3V power availability.
Usually it's green, but you decide ;-)

https://github.com/xtremespb/frank
Mikhail Matveev

Sheet: /Power/
File: power.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 3/19



https://github.com/xtremespb/frank

Mikhail Matveev

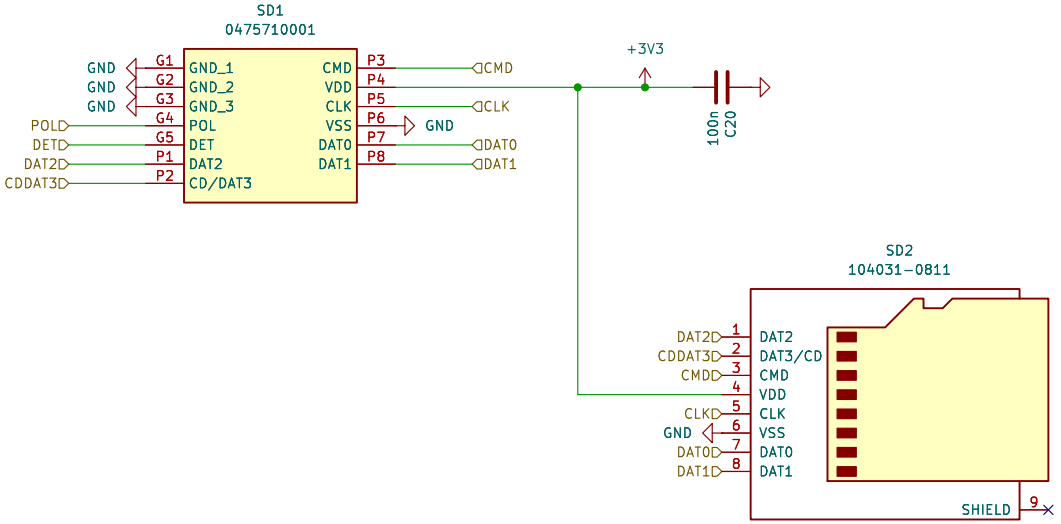
Sheet: /PS2/

File: ps2.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 4/19

Short TF Card slot is used to save some space on the PCB.



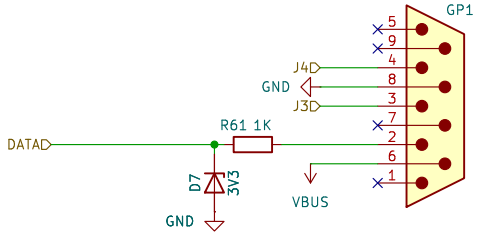
https://github.com/xtremespb/frank
Mikhail Matveev

Sheet: /Micro SD/
File: sd.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 5/19

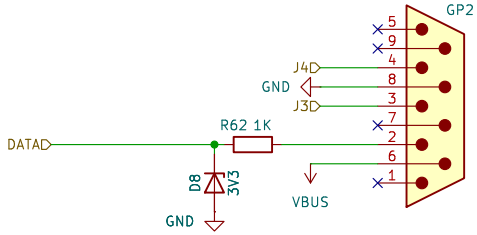
The gamepad uses standard DB9 male socket.



https://github.com/xtremespb/frank
Mikhail Matveev

Sheet: /Gamepad 1/		
File: gamepad.kicad_sch		
Title: TurboFRANK		
Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 7/19

The gamepad uses standard DB9 male socket.



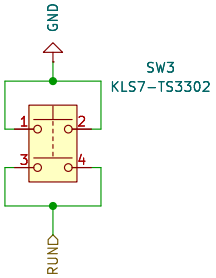
https://github.com/xtremespb/frank
Mikhail Matveev

Sheet: /Gamepad 2/
File: gamepad.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 8/19

This button connects RUN pin of RP2040
and GND.



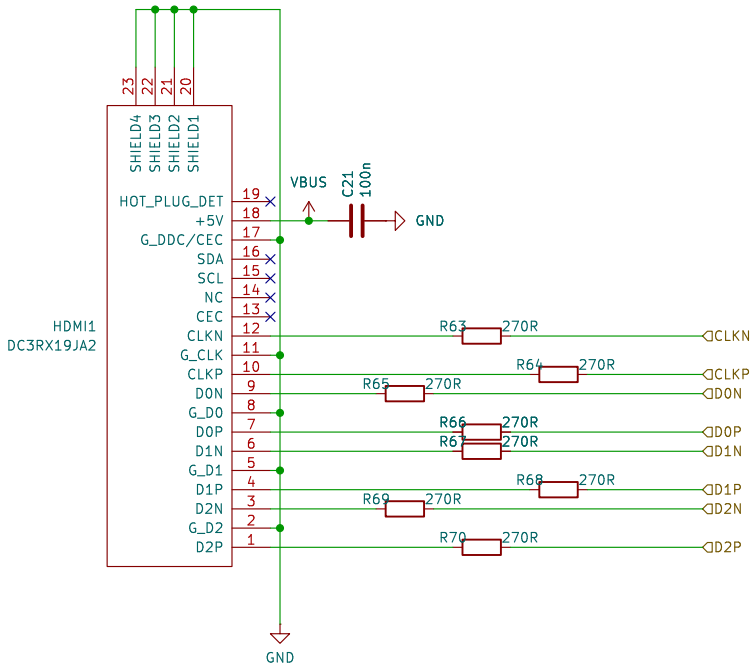
https://github.com/xtremespb/frank
Mikhail Matveev

Sheet: /Reset/
File: reset.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 9/19

HDMI video output requires the resistors to be close to the HDMI socket in order to work properly.



https://github.com/xtremespb/frank

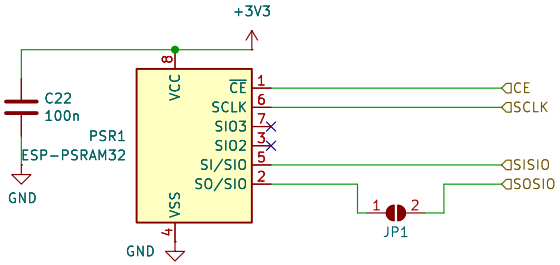
Mikhail Matveev

Sheet: /HDMI/
File: hdmi.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 10/19

As PSRAM is optional, you need to solder the jumper
if you are going to use it.



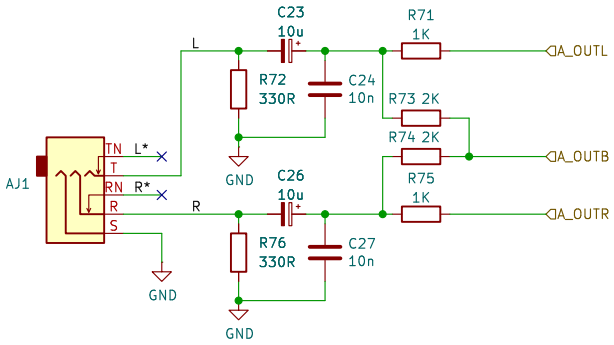
https://github.com/xtremespb/frank

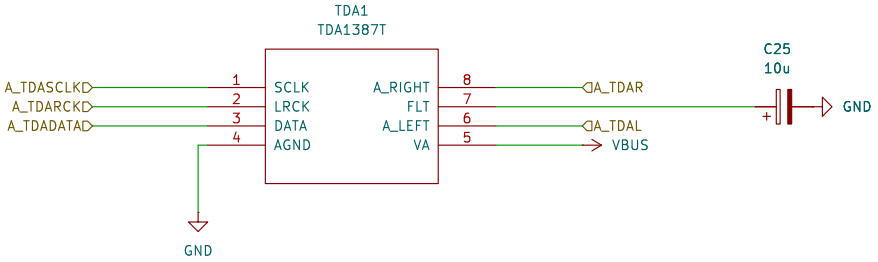
Mikhail Matveev

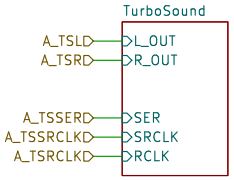
Sheet: /PSRAM/
File: psram.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 11/19







https://github.com/xtremespb/frank
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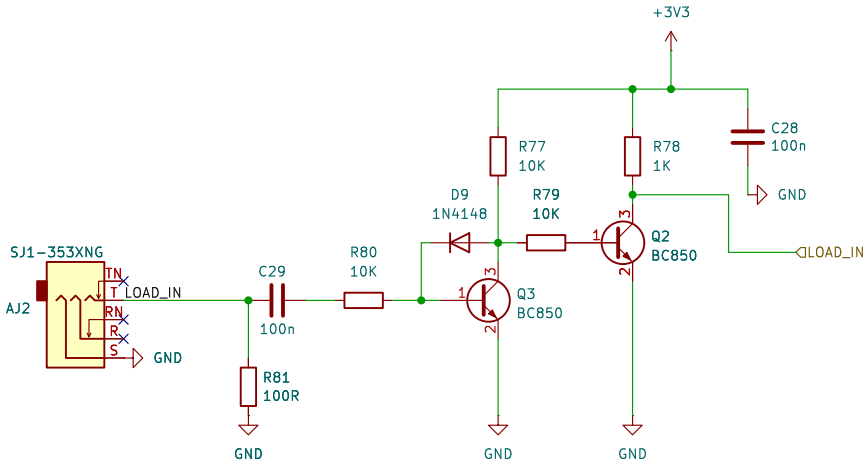
Sheet: /Audio Out/
File: audio.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 12/19

This schematics is used to load data from external audio source, e.g. tape.



https://github.com/xtremespb/frank

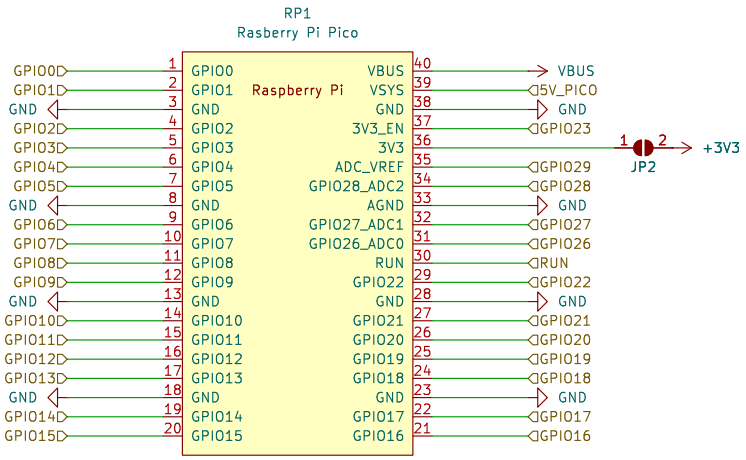
Mikhail Matveev

Sheet: /Tape In/

File: tape.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 12/19



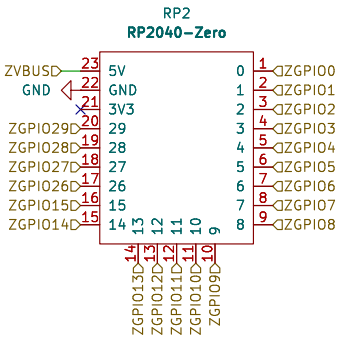
https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /Pico/
File: pico.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 12/19



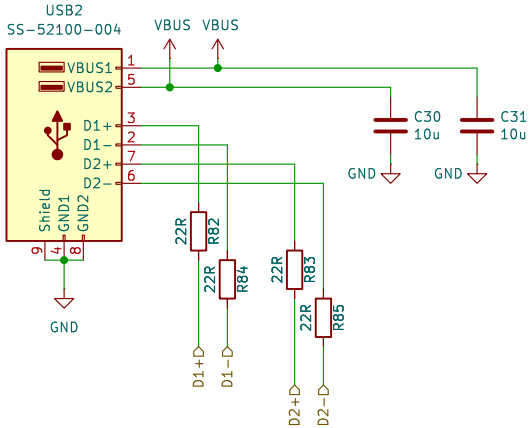
https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /Zero/
File: zero.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 14/19



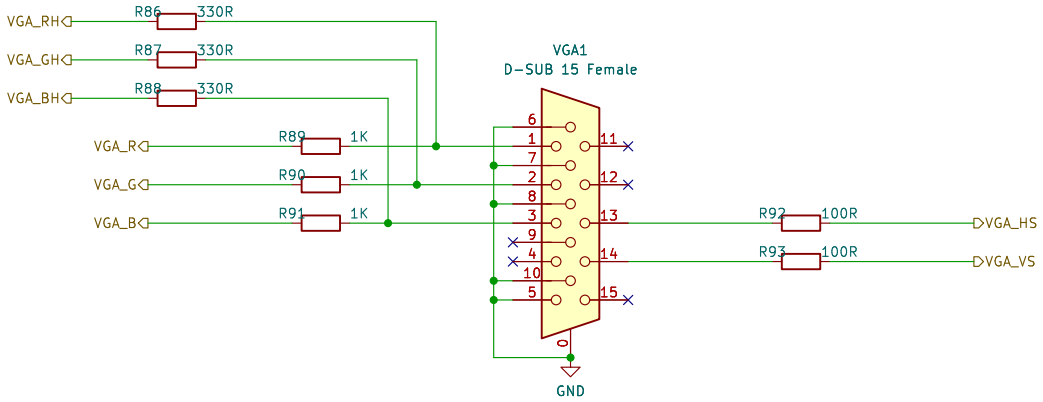
https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /USB Stacked/
File: usbstack.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 15/19



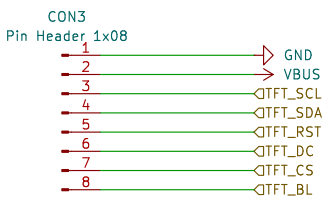
https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /VGA/
File: vga.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 16/19



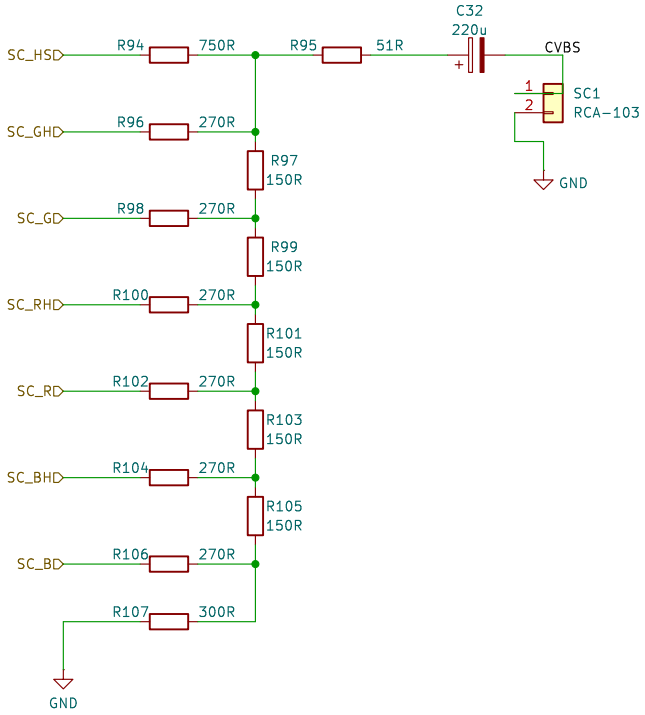
https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /Display/
File: display.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 17/19



https://github.com/xtremespb/frank

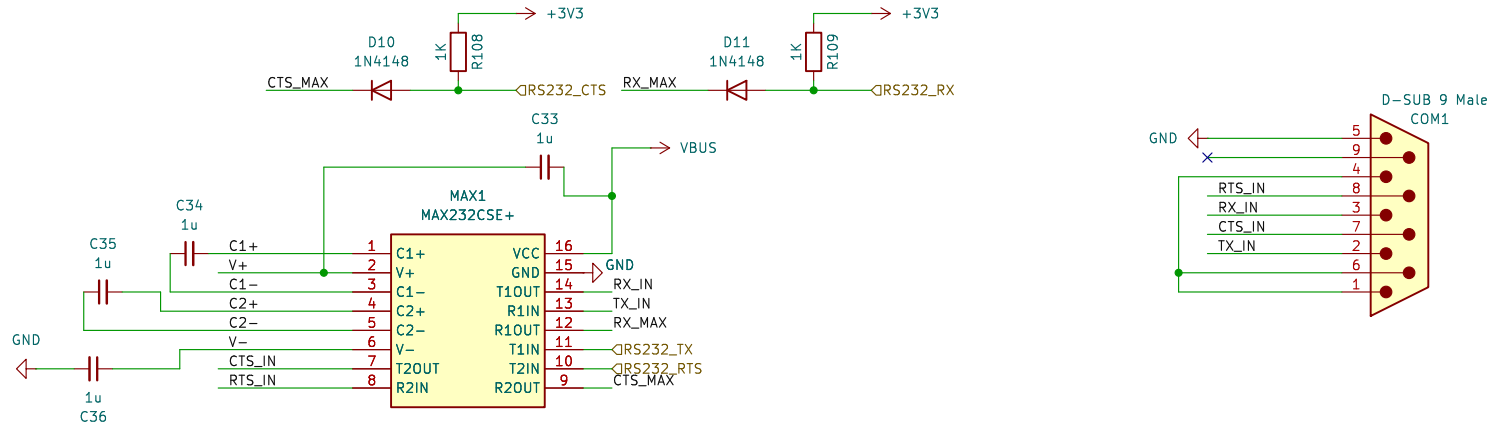
Mikhail Matveev

Sheet: /Composite/

File: composite.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025-01-29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 18/19



https://github.com/xtremespb/frank

Mikhail Matveev

Sheet: /RS232/

File: rs232.kicad_sch

Title: TurboFRANK

Size: A4	Date: 2025−01−29	**Rev: 1.0**
KiCad E.D.A. 8.0.7		Id: 19/19