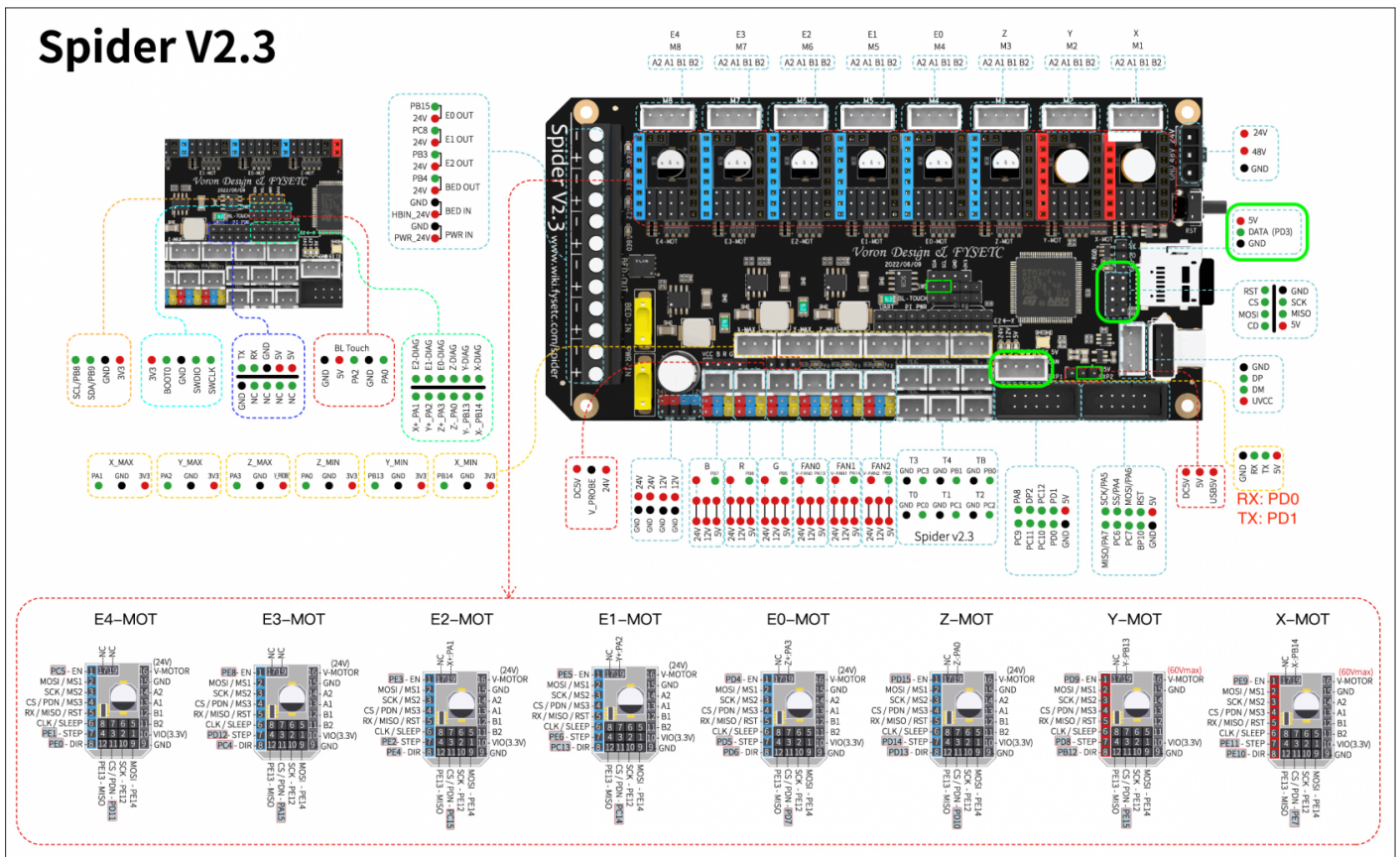


# Neopixel LED Stripes

Neopixel LEDs sind LED Streifen, die 3polig angeschlossen werden. 5V, Ground und Data.

Über die Datenleitung wird jede einzelne LED in Farbe und Helligkeit gesteuert.

Das Fysetc Spider 2.3 bietet einen RGB Port an. PD3

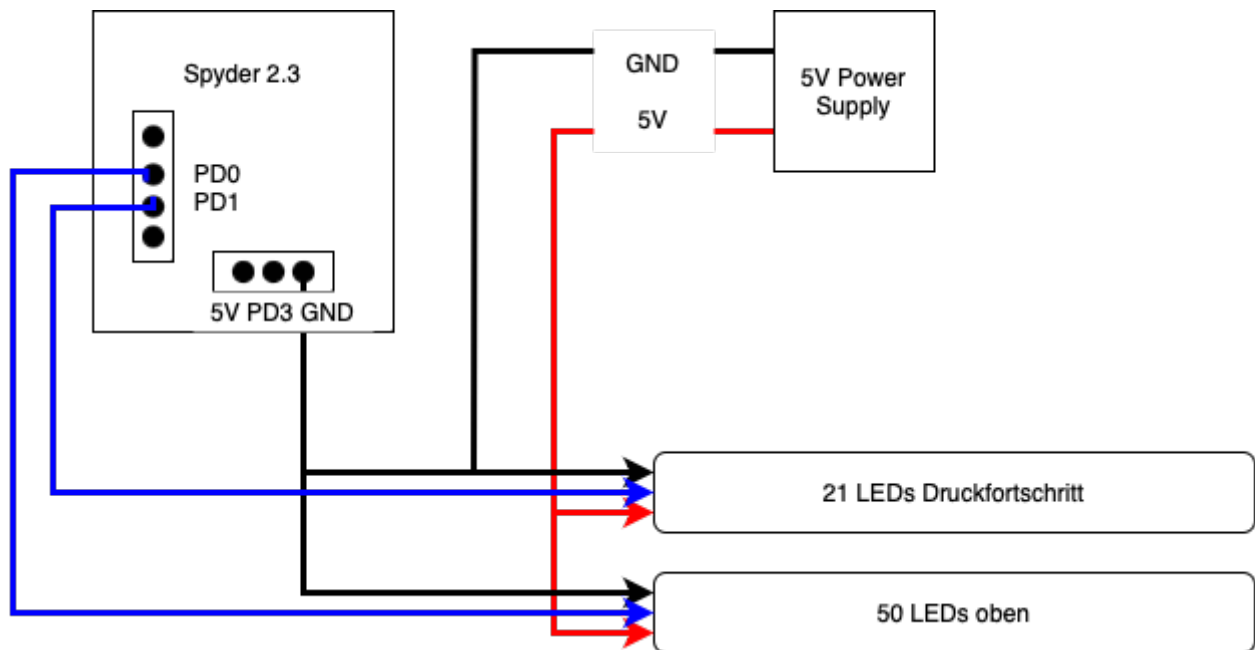


Ich muss mir irgendwie den PD3 zerstört haben. Im siboor Discord haben wir dann 2 weitere digitale Ausgänge gefunden, die für RGB Ansteuerung herangenommen werden können.

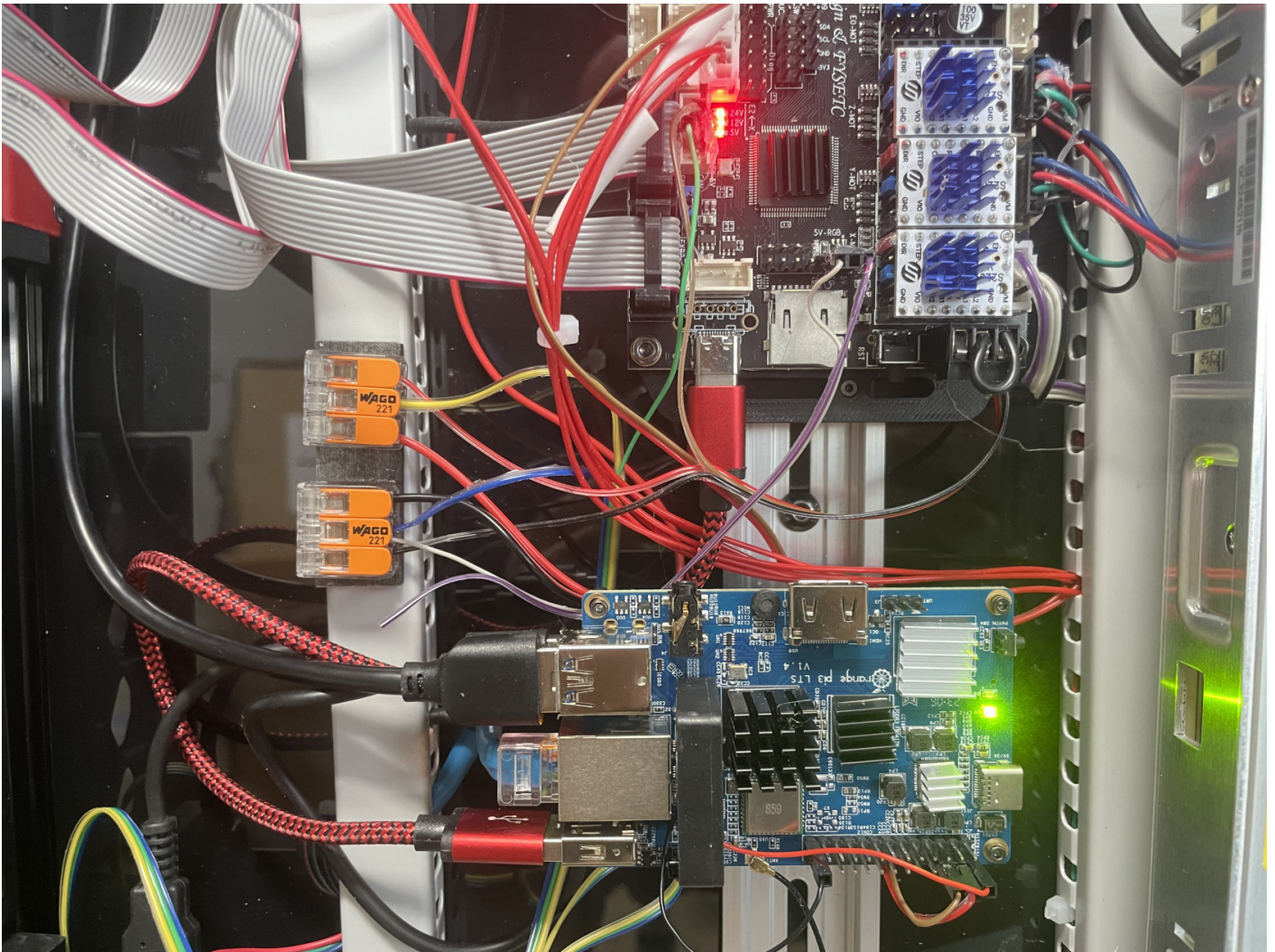
Der RX (PD0) und der TX (PD1) Port vom CANbus Anschluss.

Der interne 5V Anschluss reicht nicht für 50 LEDs aus. Darum habe ich ein zusätzliches 5V Netzteil eingebaut.

Bei der Verwendung eines externen Netzteils muss unbedingt GND gleichgeschaltet werden.



## Verdrahtung



## 5V Netzteil





neopixel.cfg

```
[neopixel chamber_leds]
pin: PD0
chain_count: 50
color_order: GRBW
initial_RED: 0.2
initial_GREEN: 0.2
initial_BLUE: 0.2
initial_WHITE: 0.2
```

```
[neopixel progress_leds]
pin: PD1
chain_count: 21
color_order: GRBW
initial_RED: 0.2
initial_GREEN: 0.2
initial_BLUE: 0.2
initial_WHITE: 0.2
```

## LED Effects

Für die Ansteuerung der LEDs nutze ich die LED Effects von Julian Schill

[https://github.com/julianschill/klipper-led\\_effect](https://github.com/julianschill/klipper-led_effect)

Damit werden sowohl die Neopixels im Stealthburner und dann meine chambers\_leds und die progress\_leds gesteuert.

```
#####
# LED Effects Animations #
#####

#####
## logo effects ##
#####

[led_effect sb_logo_busy]
autostart:      false
frame_rate:     24
leds:
  neopixel:sb_leds (1)
```

layers:

breathing 3 1 top (1,0,0)

[led\_effect sb\_logo\_cleaning]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.0, 0.02, 0.5)

[led\_effect sb\_logo\_calibrating\_z]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.0, 0.0, 0.35)

[led\_effect sb\_logo\_heating]

leds:

neopixel:sb\_leds (1)

autostart: false

frame\_rate: 24

layers:

breathing 3 1 top (1, 0.18, 0)

[led\_effect sb\_logo\_cooling]

leds:

neopixel:sb\_leds (1)

autostart: false

frame\_rate: 24

layers:

breathing 3 1 top (0, 0, 1)

[led\_effect sb\_logo\_homing]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.0, 0.6, 0.2)

[led\_effect sb\_logo\_leveling]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.5, 0.1, 0.4)

[led\_effect sb\_logo\_meshing]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.2, 1.0, 0.0)

[led\_effect sb\_logo\_printing]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

gradient 0.3 1 add (0.3, 0.0, 0.0),(0.3, 0.3, 0.0),(0.3, 0.1, 0.0)

[led\_effect sb\_logo\_standby]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.01, 0.01, 0.01)

[led\_effect sb\_logo\_part\_ready]

autostart: false

frame\_rate: 24

leds:

neopixel:sb\_leds (1)

layers:

breathing 3 1 top (0.0, 1.0, 0.0)

```
#####  
## nozzle effects ##  
#####
```

```
[led_effect sb_nozzle_heating]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (1.0, 0.18, 0.0, 0.0)
```

```
[led_effect sb_nozzle_cooling]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.0, 0.0, 1.0, 0.1)
```

```
[led_effect sb_nozzle_standby]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.6, 0.0, 0.0, 0.0)
```

```
[led_effect sb_nozzle_part_ready]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.6, 1.0, 0.0, 0.1)
```

```
#####  
## all led effects ##  
#####
```

[led\_effect sb\_critical\_error]

leds:

neopixel:sb\_leds

neopixel:chamber\_leds

layers:

strobe 1 1.5 add (1.0, 1.0, 1.0)

breathing 2 0 difference (0.95, 0.0, 0.0)

static 1 0 top (1.0, 0.0, 0.0)

autostart: false

frame\_rate: 24

run\_on\_error: true

[led\_effect rainbow]

leds:

neopixel:sb\_leds

neopixel:chamber\_leds

autostart: false

frame\_rate: 24

layers:

gradient 1 1 top (1,0,0,0),(0,1,0,0),(0,0,1,0)

#####

# LED Effects Statics #

#####

[led\_effect set\_nozzle\_leds]

leds:

neopixel:sb\_leds (2,3)

#neopixel:caselight

autostart: false

frame\_rate: 24

layers:

static 0 0 top (0.0, 0.0, 0.0, 1.0)

[led\_effect set\_logo\_leds]

leds:

neopixel:sb\_leds (1)

autostart: false

frame\_rate: 24

layers:



```
static      0 0 top    (1.0, 1.0, 1.0)
```

```
[led_effect set_chamber_white]
```

```
leds:
```

```
    neopixel:chamber_leds
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_left]
```

```
leds:
```

```
    neopixel:chamber_leds (1-20)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_right]
```

```
leds:
```

```
    neopixel:chamber_leds (31-50)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_front]
```

```
leds:
```

```
    neopixel:chamber_leds (21-30)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_progress]
```

```
leds:
```

```
    neopixel:progress_leds
```

```
autostart:      false
```

```
frame_rate:     24
```

layers:

```
progress -1 0 add      ( 0, 0, 1),( 0, 0.1, 0.6)
```

```
static    0 0 top      ( 0, 0, 0.1)
```

```
#####
```

```
# The Macros #
```

```
#####
```

```
[gcode_macro set_progress]
```

gcode:

```
SET_LED_EFFECT EFFECT=set_progress REPLACE=1
```

```
[gcode_macro stop_chamber_effects]
```

gcode:

```
STOP_LED_EFFECTS LEDS="neopixel:chamber_leds"
```

```
[gcode_macro set_chamber_white]
```

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white REPLACE=1
```

```
[gcode_macro set_chamber_white_left]
```

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_left REPLACE=1
```

```
[gcode_macro set_chamber_white_right]
```

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_right REPLACE=1
```

```
[gcode_macro set_chamber_white_front]
```

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_front REPLACE=1
```

```
[gcode_macro set_logo_leds_off]
```

gcode:

```
SET_LED_EFFECT EFFECT=set_logo_leds STOP=1
```

```
[gcode_macro set_logo_leds_on]
```

gcode:

SET\_LED\_EFFECT EFFECT=set\_logo\_leds

[gcode\_macro set\_nozzle\_leds\_on]

gcode:

SET\_LED\_EFFECT EFFECT=set\_nozzle\_leds

[gcode\_macro set\_nozzle\_leds\_off]

gcode:

SET\_LED\_EFFECT EFFECT=set\_nozzle\_leds STOP=1

[gcode\_macro status\_off]

gcode:

STOP\_LED\_EFFECTS

SET\_CHAMBER\_WHITE\_FRONT

[gcode\_macro status\_ready]

gcode:

STOP\_LED\_EFFECTS

SET\_LED\_EFFECT EFFECT=rainbow

SET\_CHAMBER\_WHITE\_FRONT

[gcode\_macro status\_part\_ready]

gcode:

STOP\_LED\_EFFECTS

SET\_LED\_EFFECT EFFECT=sb\_nozzle\_part\_ready

SET\_LED\_EFFECT EFFECT=sb\_logo\_part\_ready

SET\_CHAMBER\_WHITE\_FRONT

[gcode\_macro status\_busy]

gcode:

STOP\_LED\_EFFECTS

SET\_LED\_EFFECT EFFECT=sb\_logo\_busy

SET\_CHAMBER\_WHITE\_FRONT

set\_nozzle\_leds\_on

[gcode\_macro status\_heating]

gcode:

STOP\_LED\_EFFECTS

SET\_LED\_EFFECT EFFECT=sb\_logo\_heating

SET\_LED\_EFFECT EFFECT=sb\_nozzle\_heating

SET\_CHAMBER\_WHITE\_FRONT

[gcode\_macro status\_cooling]

gcode:

STOP\_LED\_EFFECTS  
SET\_LED\_EFFECT EFFECT=sb\_logo\_cooling  
SET\_LED\_EFFECT EFFECT=sb\_nozzle\_cooling  
SET\_CHAMBER\_WHITE\_FRONT

[gcode\_macro status\_leveling]

gcode:

STOP\_LED\_EFFECTS  
SET\_LED\_EFFECT EFFECT=sb\_logo\_leveling  
SET\_CHAMBER\_WHITE\_FRONT  
set\_nozzle\_leds\_on

[gcode\_macro status\_homing]

gcode:

STOP\_LED\_EFFECTS  
SET\_LED\_EFFECT EFFECT=sb\_logo\_homing  
SET\_CHAMBER\_WHITE\_FRONT  
set\_nozzle\_leds\_on

[gcode\_macro status\_cleaning]

gcode:

STOP\_LED\_EFFECTS  
SET\_LED\_EFFECT EFFECT=sb\_logo\_cleaning  
SET\_CHAMBER\_WHITE\_FRONT  
set\_nozzle\_leds\_on

[gcode\_macro status\_meshing]

gcode:

STOP\_LED\_EFFECTS  
SET\_LED\_EFFECT EFFECT=sb\_logo\_meshing  
SET\_CHAMBER\_WHITE\_FRONT  
set\_nozzle\_leds\_on

[gcode\_macro status\_calibrating\_z]

gcode:

STOP\_LED\_EFFECTS



```
SET_LED_EFFECT EFFECT=sb_logo_calibrating_z
```

```
SET_CHAMBER_WHITE
```

```
set_nozzle_leds_on
```

```
[gcode_macro status_printing]
```

```
gcode:
```

```
STOP_LED_EFFECTS
```

```
SET_CHAMBER_WHITE
```

```
SET_LED_EFFECT EFFECT=sb_logo_printing
```

```
set_nozzle_leds_on
```

```
set_progress
```

---

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