

The diagram illustrates the secondary pins of the Raspberry Pi Pico W, showing connections to various external components. The components and their connections are as follows:

- USB Type-C Connector (U1):**
 - VCC (Pin 1) to 3V3
 - RESET (Pin 3) to RESET
 - SWCLK (Pin 4) to D1
 - SWDIO (Pin 2) to D3
 - SWO (Pin 6) to GND
 - GND (Pin 5) to GND
- TPD3E001DRLR U6 (USB-to-UART Bridge):**
 - IO1 (Pin 1) to TP3
 - IO2 (Pin 2) to TP2
 - IO3 (Pin 3) to TP1
 - VBUS (Pin 5) to VBUS
 - GND (Pin 4) to GND
- Other Components and Connections:**
 - Buzzer (Pin 4) to Buzzer
 - Button4 (Pin 5) to Button4
 - Button5 (Pin 6) to Button5
 - MPRLS_DRDY_RES (Pin 7) to MPRLS_DRDY_RES
 - 3V3_ADC_ENABLE (Pin 10) to 3V3_ADC_ENABLE
 - Button1 (Pin 11) to Button1
 - Button2 (Pin 12) to Button2
 - NEOPIXEL (Pin 14) to NEOPIXEL
 - Button3 (Pin 15) to Button3
 - SDA_INT (Pin 16) to SDA_INT
 - SCL_INT (Pin 17) to SCL_INT
 - IR_LED (Pin 19) to IR_LED
 - GPIO0 (Pin 1) to GPIO0
 - GPIO1 (Pin 2) to GPIO1
 - GPIO2 (Pin 3) to GPIO2
 - GPIO3 (Pin 4) to GPIO3
 - GPIO4 (Pin 5) to GPIO4
 - GPIO5 (Pin 6) to GPIO5
 - GPIO6 (Pin 7) to GPIO6
 - GPIO7 (Pin 8) to GPIO7
 - GPIO8 (Pin 9) to GPIO8
 - GPIO9 (Pin 10) to GPIO9
 - GPIO10 (Pin 11) to GPIO10
 - GPIO11 (Pin 12) to GPIO11
 - GPIO12 (Pin 13) to GPIO12
 - GPIO13 (Pin 14) to GPIO13
 - GPIO14 (Pin 15) to GPIO14
 - GPIO15 (Pin 16) to GPIO15
 - LED_OUT (Pin 17) to LED_OUT
 - IR_TSOP (Pin 18) to IR_TSOP
 - ADC_VREF (Pin 19) to ADC_VREF
 - GPIO26_ADC0 (Pin 20) to GPIO26_ADC0
 - GPIO27_ADC1 (Pin 21) to GPIO27_ADC1
 - GPIO28_ADC2 (Pin 22) to GPIO28_ADC2
 - AGND (Pin 23) to AGND
 - SMP5_PS (Pin 24) to SMP5_PS
 - RESET (Pin 30) to RESET
 - 3V3_EN (Pin 37) to 3V3_EN
 - BOOTSEL (Pin 38) to BOOTSEL

SFH4045: Vtyp=1.5V@70mA; max. 1.75V

In this setup, all 4 LEDs are around 100–200mA pulsed, so the maximum duty cycle for IR sending should be around 0.3. In total we need ~200–400mA for sending, therefore we have an additional capacitor for the DCDC power supply. Should we need to add a resistor at some point, cut the jumper and place the resistor.

The diagram shows a 7-pin connector labeled J11, display_connector_91601-304LF. The pins are numbered 1 through 7. The connections are as follows:

- Pin 1: GND
- Pin 3: VCC
- Pin 5: SCL_INT
- Pin 7: SDA_INT

Resistors are connected as follows:

- R1 (4k7) is connected between VCC and SCL_INT.
- R2 (4k7) is connected between VCC and SDA_INT.
- R6 (10k) is connected between SCL_INT and GND.
- R7 (10k) is connected between SDA_INT and GND.

J10
Conn_01x03_Male

GND \leftarrow 3
NEOPIXEL \leftarrow 2
VBUS \leftarrow 1

SMD Pads:

GND \leftarrow 1 J11_GND1
NEOPIXEL \leftarrow 1 J11_data1
VBUS \leftarrow 1 J11_VDD1

LOG05	Fiducial
Logo_FABI	FID8
LOG06	Fiducial
Logo_KiCAD	FID9
LOG07	Fiducial
Logo_CE	FID10
LOG08	Fiducial
Logo_WEEE	FID11
	FID12
	Fiducial

Conn_01x04_Male

J13

1 2 3 4

GND GND SCL_INT SDA_INT

VCC

009159005551906

J12

5 GND

4 +3.3VDC

3 MPRLS_DRDY_RES

2 SDA

1 SCL

Sheet: /	
File: FAB1_schematic.kicad_sch	
Title: FAB13 PCB (PicoW) with 5 jack plugs	
Size: A4	Date: 2023-07-12
KiCad E.D.A. kicad 7.0.5+dfsg-2	Rev: v3.0
	Id: 1 / 1