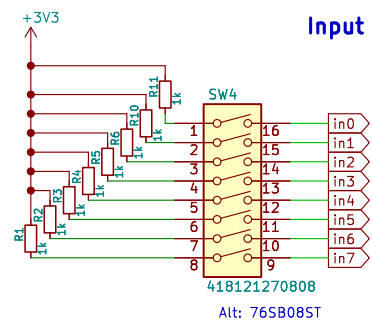


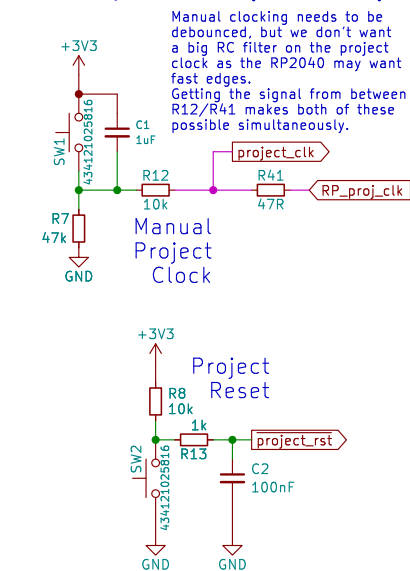
# TinyTapeout 4/5 Demo Board

## User Input + Config

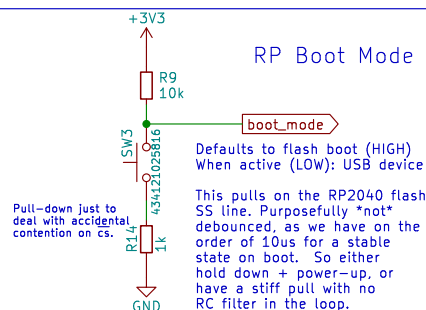
### Input DIP



### Momentary Switches (debounced)

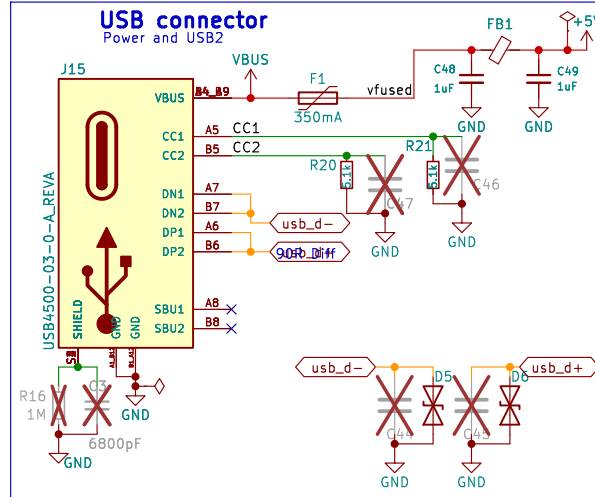


### RP Boot Mode

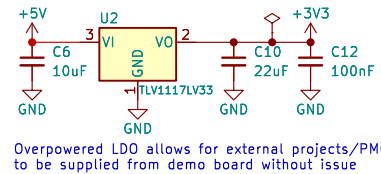


## Power

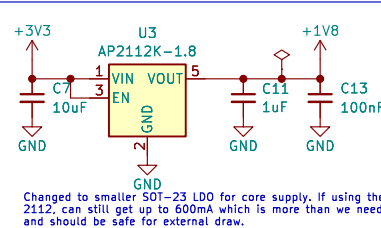
### USB connector



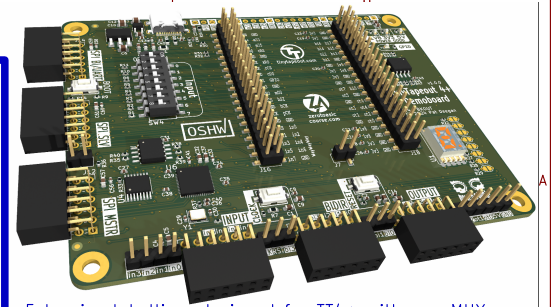
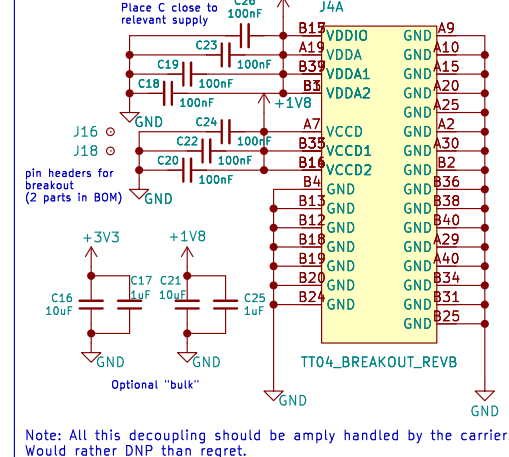
### 3V3 LDO



### 1.8V LDO



### TT Carrier Power

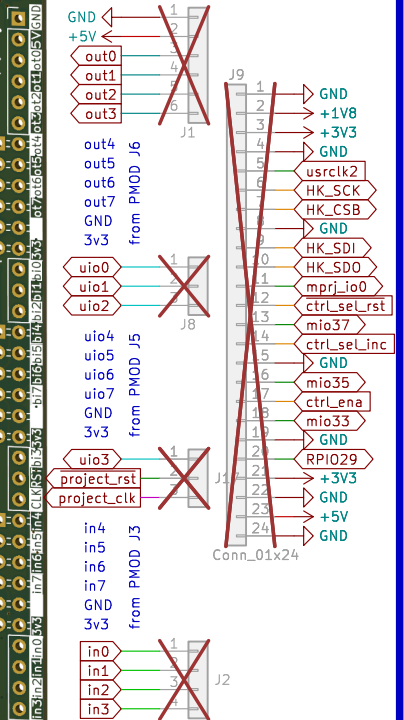


Extensive labelling, designed for TT4+ with new MUX, RP2040 on board, accessed via USB. Project clock from RP2040, external or manual, DIP switches for inputs, 7-segment display (remappable with jumpers) on outputs, full access to 8 in, out and bidirectionals via PMODs, all pins broken out in headers.

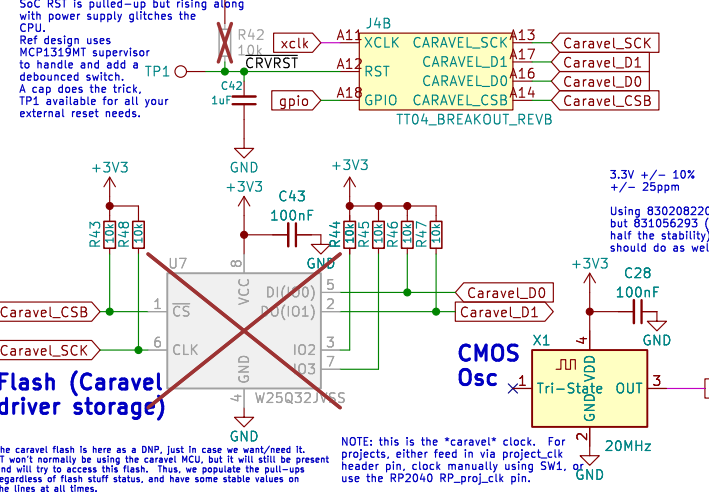
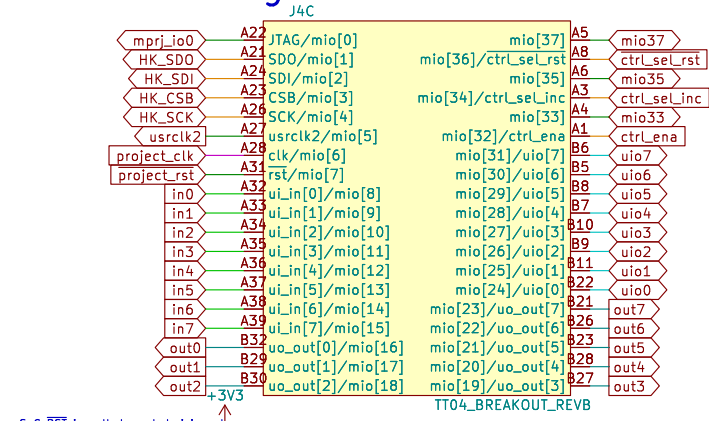
Power via +5V USB, or 5V breakout pin. On-board regulation to 3v3 and 1v8. VDDIO is 3v3, including on PMODs. <https://github.com/TinyTapeout/tt-demo-pcb>

### Board edge connectors (pinheaders)

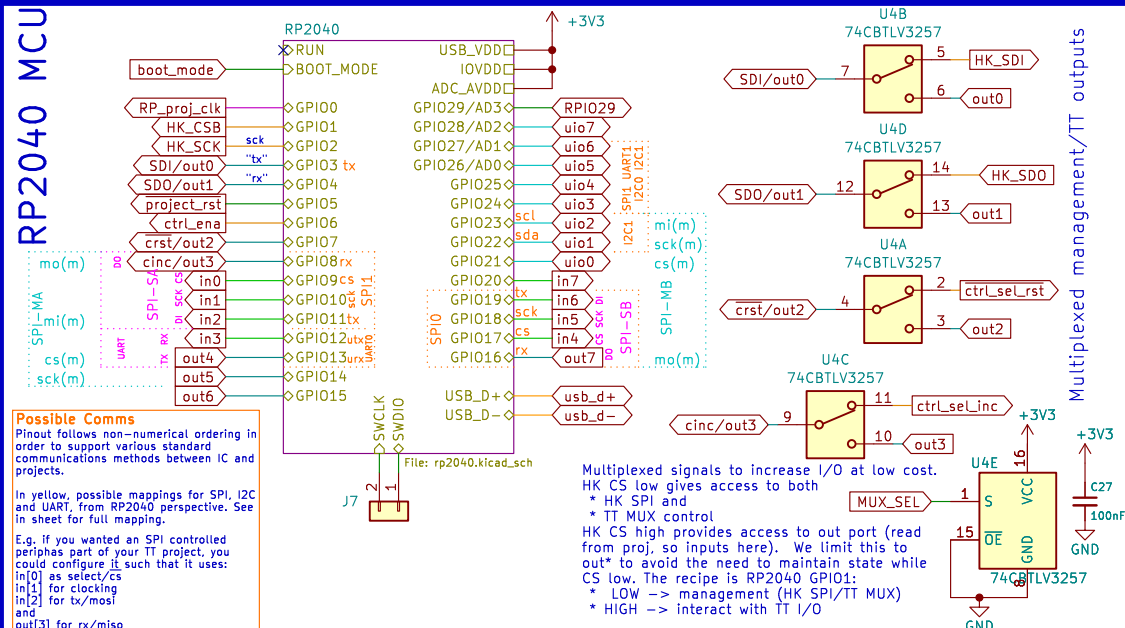
I/O is available through standard PMODs or, with judicious placement, as a single 100mil pin header



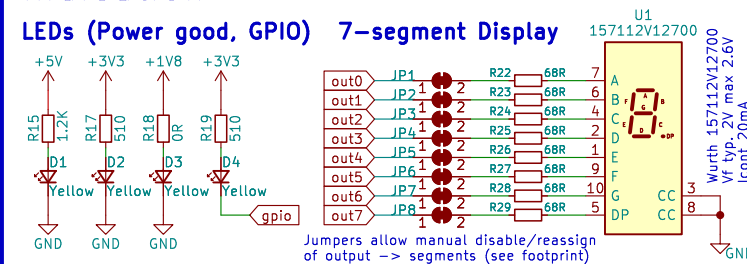
## TT Carrier Logic



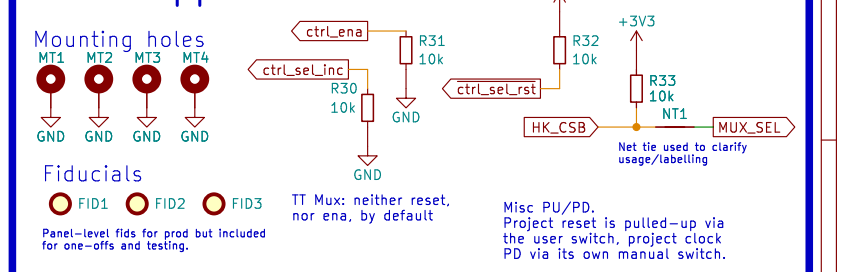
## RP2040 MCU



## Indication

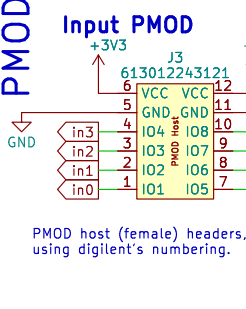


## Misc Support

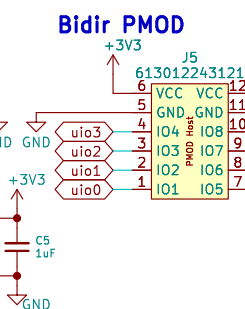


## PMOD

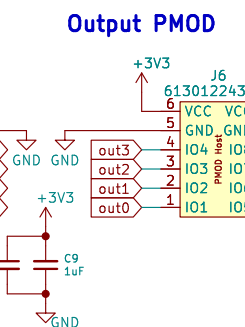
### Input PMOD



### Bidir PMOD

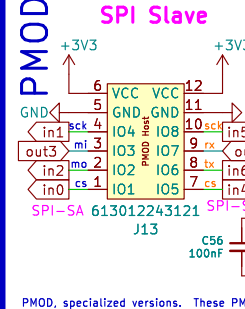


### Output PMOD

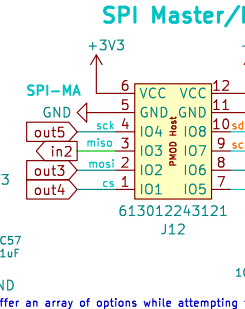


## PMOD

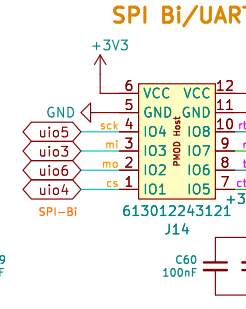
### SPI Slave



### SPI Master/I2C



### SPI Bi/UART



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File: tinytapeout-demo.kicad\_sch

Title: TinyTapeout 4/5 Demo Board

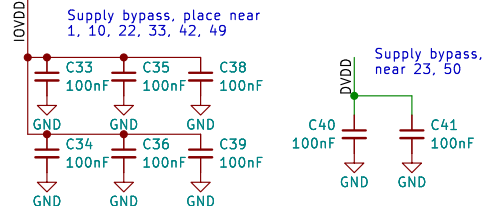
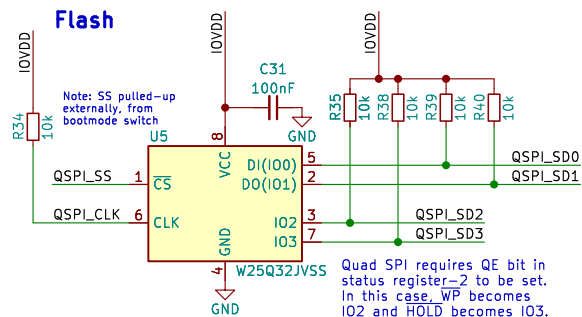
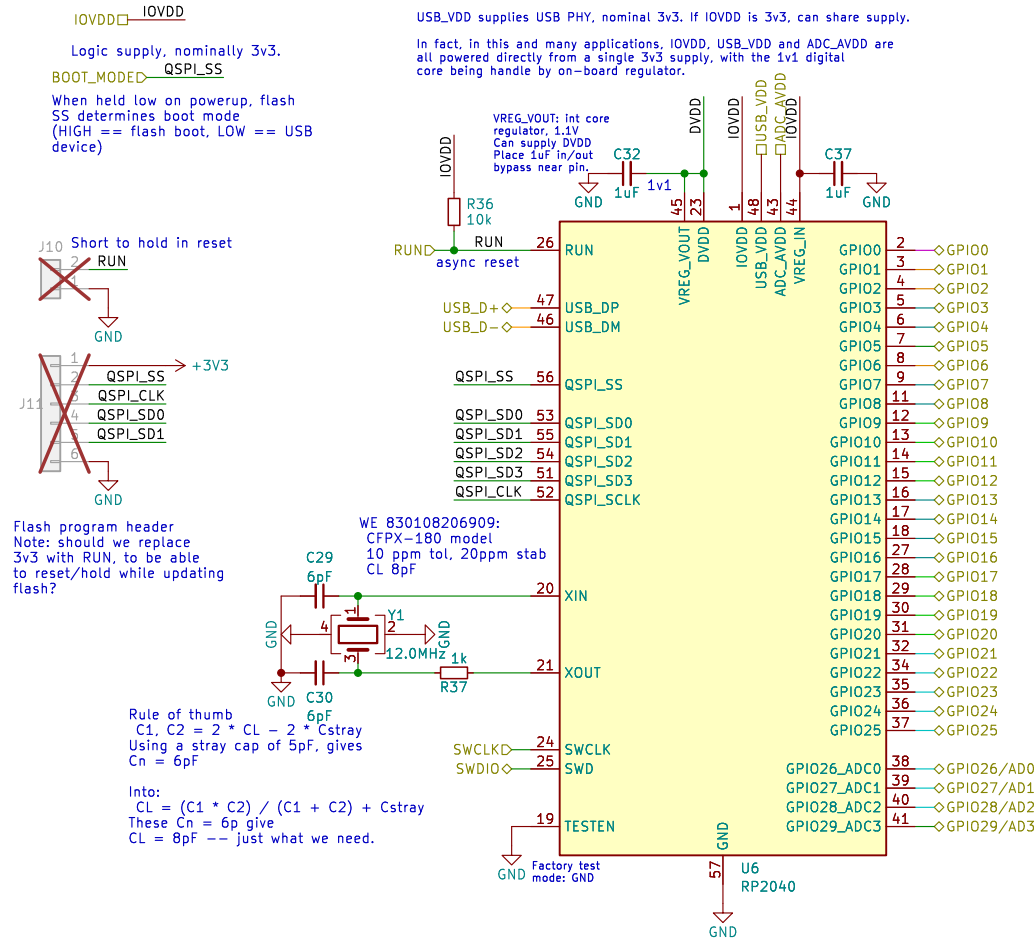
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KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Rev: 1.0.5

Id: 1/2

# RP2040 Basic Support



GPIO	Function	F1	F2	F3	F4	F5	F6	F7	F8	F9
0	SPI0 RX	UART0 TX	I2C0 SDA	PWM0 A	SIO	PI00	PI01			USB OVCUR DET
1	SPI0 CSn	UART0 RX	I2C0 SCL	PWM0 B	SIO	PI00	PI01			USB VBUS DET
2	SPI0 SCK	UART0 CTS	I2C1 SDA	PWM1 A	SIO	PI00	PI01			USB VBUS EN
3	SPI0 TX	UART0 RTS	I2C1 SCL	PWM1 B	SIO	PI00	PI01			USB OVCUR DET
4	SPI0 RX	UART1 TX	I2C0 SDA	PWM2 A	SIO	PI00	PI01			USB VBUS DET
5	SPI0 CSn	UART1 RX	I2C0 SCL	PWM2 B	SIO	PI00	PI01			USB VBUS EN
6	SPI0 SCK	UART1 CTS	I2C1 SDA	PWM3 A	SIO	PI00	PI01			USB OVCUR DET
7	SPI0 TX	UART1 RTS	I2C1 SCL	PWM3 B	SIO	PI00	PI01			USB VBUS DET
8	SPI1 RX	UART1 TX	I2C0 SDA	PWM4 A	SIO	PI00	PI01			USB VBUS EN
9	SPI1 CSn	UART1 RX	I2C0 SCL	PWM4 B	SIO	PI00	PI01			USB OVCUR DET
10	SPI1 SCK	UART1 CTS	I2C1 SDA	PWM5 A	SIO	PI00	PI01			USB VBUS DET
11	SPI1 TX	UART1 RTS	I2C1 SCL	PWM5 B	SIO	PI00	PI01			USB VBUS EN
12	SPI1 RX	UART0 TX	I2C0 SDA	PWM6 A	SIO	PI00	PI01			USB OVCUR DET
13	SPI1 CSn	UART0 RX	I2C0 SCL	PWM6 B	SIO	PI00	PI01			USB VBUS DET
14	SPI1 SCK	UART0 CTS	I2C1 SDA	PWM7 A	SIO	PI00	PI01			USB VBUS EN
15	SPI1 TX	UART0 RTS	I2C1 SCL	PWM7 B	SIO	PI00	PI01			USB OVCUR DET
16	SPI0 RX	UART0 TX	I2C0 SDA	PWM0 A	SIO	PI00	PI01			USB VBUS DET
17	SPI0 CSn	UART0 RX	I2C0 SCL	PWM0 B	SIO	PI00	PI01			USB VBUS EN
18	SPI0 SCK	UART0 CTS	I2C1 SDA	PWM1 A	SIO	PI00	PI01			USB OVCUR DET
19	SPI0 TX	UART0 RTS	I2C1 SCL	PWM1 B	SIO	PI00	PI01			USB VBUS DET
20	SPI0 RX	UART1 TX	I2C0 SDA	PWM2 A	SIO	PI00	PI01	CLOCK GPIN0		USB VBUS EN
21	SPI0 CSn	UART1 RX	I2C0 SCL	PWM2 B	SIO	PI00	PI01	CLOCK GPIN1		USB OVCUR DET
22	SPI0 SCK	UART1 CTS	I2C1 SDA	PWM3 A	SIO	PI00	PI01	CLOCK GPIN2		USB VBUS DET
23	SPI0 TX	UART1 RTS	I2C1 SCL	PWM3 B	SIO	PI00	PI01	CLOCK GPIN3		USB VBUS EN
24	SPI1 RX	UART1 TX	I2C0 SDA	PWM4 A	SIO	PI00	PI01	CLOCK GPIN4		USB OVCUR DET
25	SPI1 CSn	UART1 RX	I2C0 SCL	PWM4 B	SIO	PI00	PI01	CLOCK GPIN5		USB VBUS DET
26	SPI1 SCK	UART1 CTS	I2C1 SDA	PWM5 A	SIO	PI00	PI01			USB VBUS EN
27	SPI1 TX	UART1 RTS	I2C1 SCL	PWM5 B	SIO	PI00	PI01			USB OVCUR DET
28	SPI1 RX	UART0 TX	I2C0 SDA	PWM6 A	SIO	PI00	PI01			USB VBUS DET
29	SPI1 CSn	UART0 RX	I2C0 SCL	PWM6 B	SIO	PI00	PI01			USB VBUS EN

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File: rp2040.kicad\_sch

**Title: RP2040 Basic Support**

Size: A4 Date: 2023-11-22

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Rev: 1.0.3

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