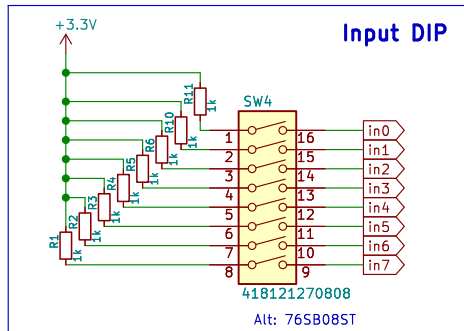
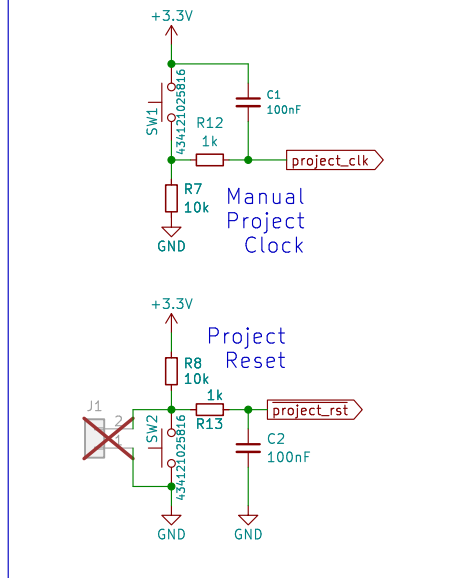


TinyTapeout 4/5 Demo Board (preliminary)

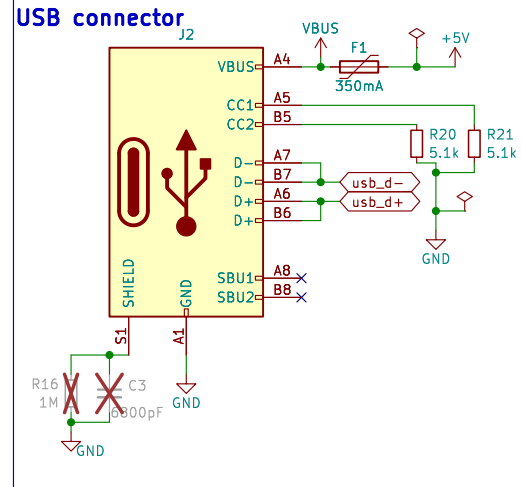
User Input + Config



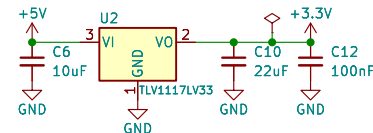
Momentary Switches (debounced)



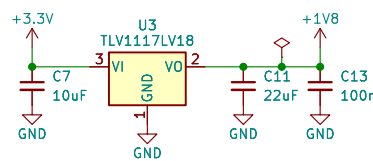
Power



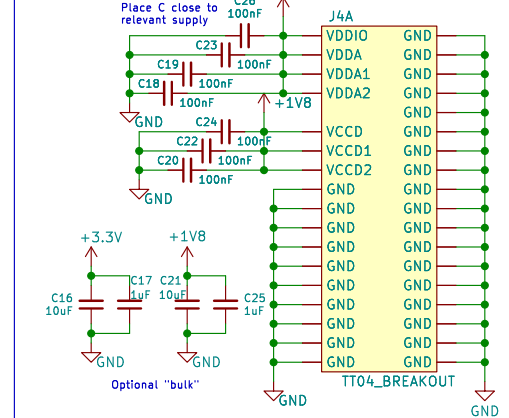
3.3V LDO



1.8V LDO

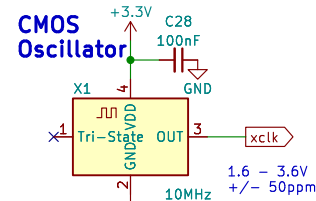
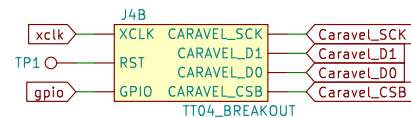
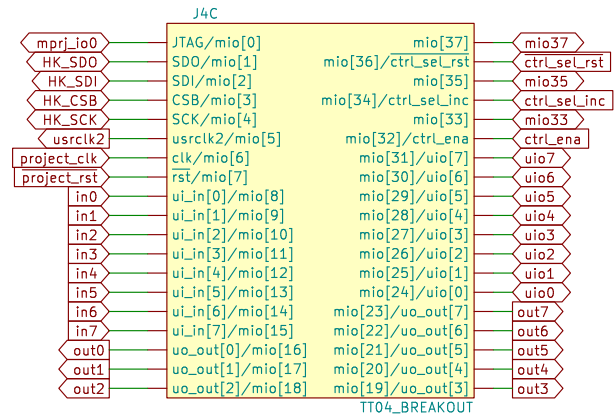


TT Carrier Power



Note: All this decoupling should be amply handled by the carrier. Would rather DNP than regret.

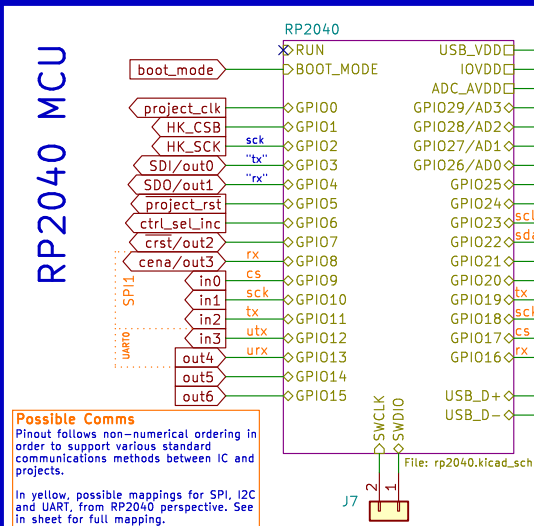
TT Carrier Logic



Std 4-pin 2.5x2.0mm osc

NOTE: this is the *caravel* clock.

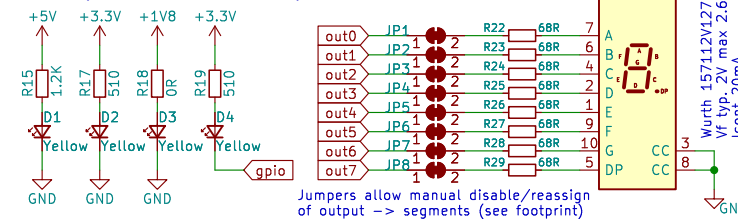
RP2040 MCU



Possible Comms
Pinout follows non-numerical ordering in order to support various standard communications methods between IC and projects.
In yellow, possible mappings for SPI, I2C and UART, from RP2040 perspective. See in sheet for full mapping.
E.g. If you wanted an SPI controlled periph part of your TT project, you could configure it such that it uses:
in[0] as select/cs
in[1] for clocking
in[2] for tx/mosi
and out[3] for rx/miso

Indication

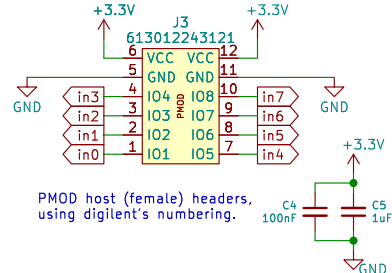
LEDs (Power good, GPIO) 7-segment Display



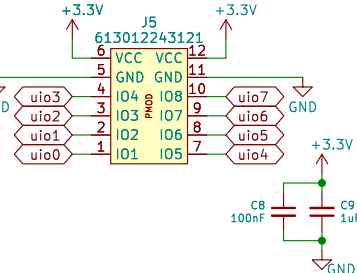
Jumpers allow manual disable/reassign of output -> segments (see footprint)

PMOD

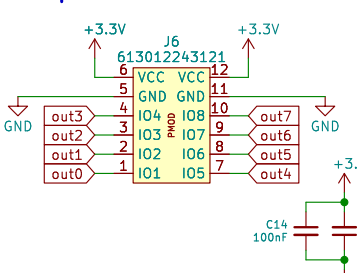
Input PMOD



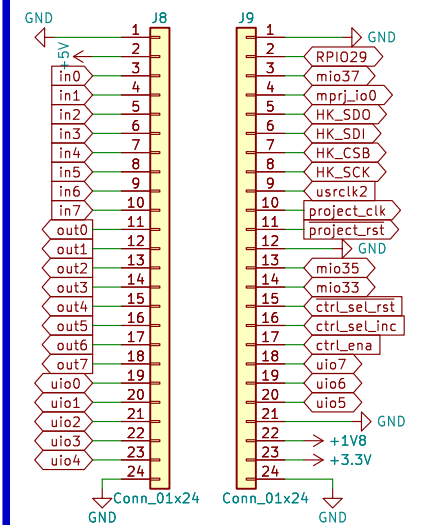
Bidir PMOD



Output PMOD

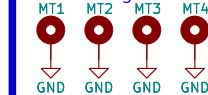


Board edge connectors (pinheaders)

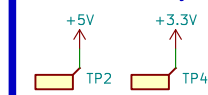
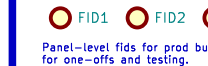


Misc Support

Mounting holes



Fiducials



(C) 2023 Pat Deegan

Psychogenic Technologies

Sheet: /

File: tinytapeout-mb.kicad_sch

Title: TinyTapeout 4/5 Demo Board PRELIM

Size: A3

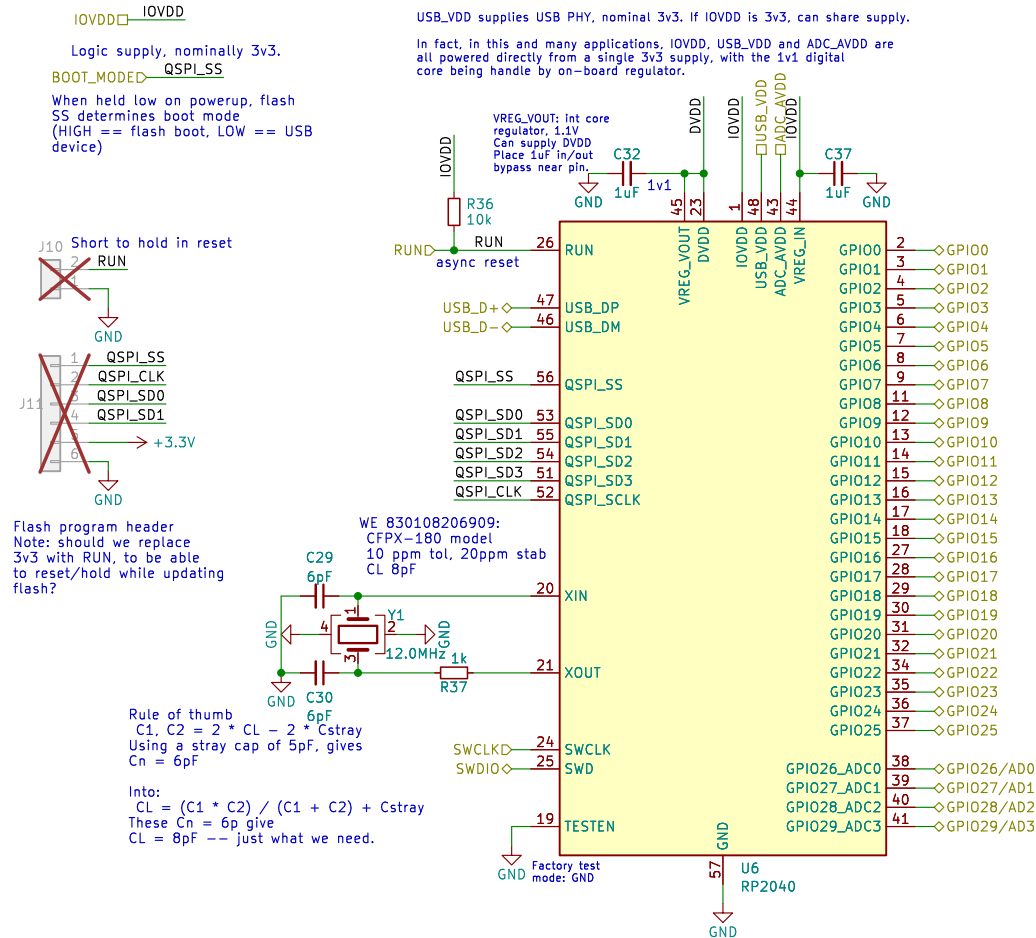
Date: 2023-10-12

Rev: 1.0.1

KiCad E.D.A. kicad 7.0.8-7.0.8-ubuntu22.04.1

Id: 1/2

RP2040 Basic Support



GPIO	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 GPIN1	USB VBUS DET
23	SPI0 TX	UART1 RTS	I2C1 SCL	PWM3 B	SIO	PI00	PI01	CLOCK GPIN1	USB VBUS EN
24	SPI1 RX	UART1 TX	I2C0 SDA	PWM4 A	SIO	PI00	PI01	CLOCK GPIN2	USB OVCUR DET
25	SPI1 CSn	UART1 RX	I2C0 SCL	PWM4 B	SIO	PI00	PI01	CLOCK GPIN3	USB VBUS DET
26	SPI1 SCK	UART1 CTS	I2C1 SDA	PWM5 A	SIO	PI00	PI01		USB V