Pi header, 5 V back-feed block, 3V3 filter, indicators



File: power.kicad_sch

Socket Y (7 GPIO)



File: socket-y.kicad_sch

Socket S (SPI)



File: socket-s.kicad_sch

Sockets U (UART) and P (PWM)



File: socket-u-p.kicad_sch

Socket I (I2C) and Qwiic / header alternative



File: socket-i-qwiic.kicad_sch

PWR_FLAG



PWR_FLAG



PWR_FLAG



PWR_FLAG



5 V arrives on Pi header pins 2 and 4 (passive pins), flagged as the 5 V source

3.3 V arrives on Pi header pins 1 and 17 (passive pins), flagged as the 3.3 V source

Ground arrives on the Pi header GND pins (passive), flagged as the reference

filtered 3.3 V output of ferrite bead FB1 (passive), flagged as a source

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Smoothieware / CERN-OHL-S-2.0

Sheet: /

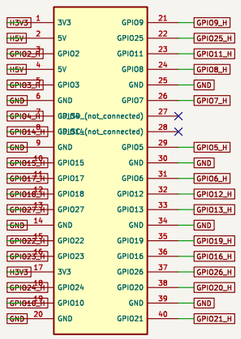
File: raspberry-pi-to-gadgeteer-hat.kicad_sch

Title: Raspberry Pi 40-pin to Gadgeteer HAT

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 1/6

Pi header, 5 V back-feed block, 3V3 filter, indicators / WIP — same-name global labels connect

J8



2x20 stacking receptacle 2.54 mm

FB1



ferrite 0603 (>=500 mA, DCR <= 0.3 ohm)

U1



LM66100DCKR

C1



10uF 10V 0805

C2



10uF 10V 0805

C3



10uF 10V 0805

C4



100nF 16V 0402

C5



100nF 16V 0402

JP1



LED 3V3 enable (bridged)

R27



1k 0603

LED1



green 0603 3V3

JP2



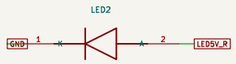
LED 5V enable (bridged)

R28



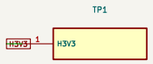
2.2k 0603

LED2



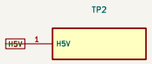
green 0603 5V

TP1



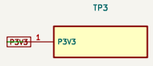
TP H3V3

TP2



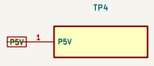
TP H5V

TP3



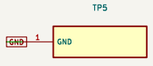
TP P3V3

TP4



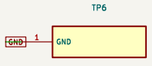
TP P5V

TP5



TP GND

TP6



TP GND

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Smoothieware / CERN-OHL-S-2.0

Sheet: /Pi header, 5 V back-feed block, 3V3 filter, indicators/

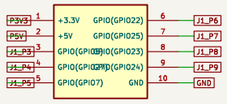
File: power.kicad_sch

Title: Pi header, 5 V back-feed block, 3V3 filter, indicators

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 2/6

Socket Y (7 GPIO) / WIP — same-name global labels connect

J1



Gadgeteer socket Y

R4



100R 1% 0402

D4



TPD1E10B06DPYR

R6



100R 1% 0402

D6



TPD1E10B06DPYR

R21



100R 1% 0402

D21



TPD1E10B06DPYR

R22



100R 1% 0402

D22



TPD1E10B06DPYR

R23



100R 1% 0402

D23



TPD1E10B06DPYR

R24



100R 1% 0402

D24



TPD1E10B06DPYR

R26



100R 1% 0402

D26



TPD1E10B06DPYR

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

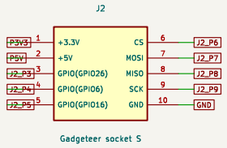
Sheet: /Socket Y (7 GPIO)/

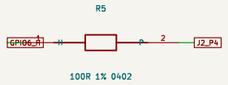
File: socket-y.kicad_sch

Title: Socket Y (7 GPIO)

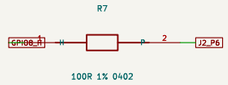
Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 3/6

Socket S (SPI) / WIP — same-name global labels connect

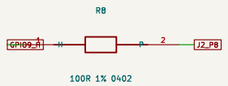




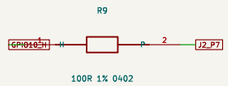








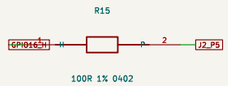




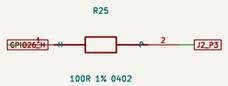














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Sheet: /Socket S (SPI)/

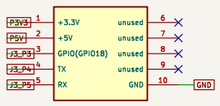
File: socket-s.kicad_sch

Title: Socket S (SPI)

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 4/6

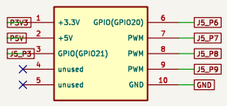
Sockets U (UART) and P (PWM) / WIP — same-name global labels connect

J3



Gadgeteer socket U

J5



Gadgeteer socket P

R11



100R 1% 0402

D11



TPD1E10B06DPYR

R12



100R 1% 0402

D12



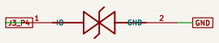
TPD1E10B06DPYR

R13



100R 1% 0402

D13



TPD1E10B06DPYR

R14



100R 1% 0402

D14



TPD1E10B06DPYR

R17



100R 1% 0402

D17



TPD1E10B06DPYR

R18



100R 1% 0402

D18



TPD1E10B06DPYR

R19



100R 1% 0402

D19



TPD1E10B06DPYR

R20



100R 1% 0402

D20



TPD1E10B06DPYR

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Smoothieware / CERN-OHL-S-2.0

Sheet: /Sockets U (UART) and P (PWM)/

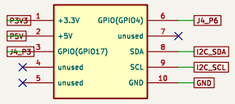
File: socket-u-p.kicad_sch

Title: Sockets U (UART) and P (PWM)

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 5/6

Socket I (I2C) and Qwiic / header alternative / WIP — same-name global labels connect

J4



Gadgeteer socket I

R1



100R 1% 0402

D1



TPD1E10B06DPYR

R2



100R 1% 0402

D2



TPD1E10B06DPYR

R3



100R 1% 0402

D3



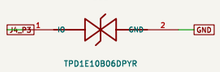
TPD1E10B06DPYR

R16



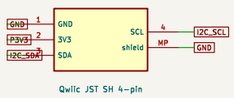
100R 1% 0402

D16



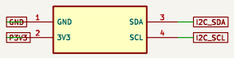
TPD1E10B06DPYR

J6



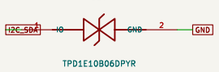
Qwiic JST SH 4-pin

J7



2.54 mm 1x4 header (alternative to J6)

D27



TPD1E10B06DPYR

D28



TPD1E10B06DPYR

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Socket I (I2C) and Qwiic / header alternative/

File: socket-i-qwiic.kicad_sch

Title: Socket I (I2C) and Qwiic / header alternative

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 6/6