Local power 1

File: sheet-1.kicad_sch

Local power 2

File: sheet-2.kicad_sch

Analog IO

File: sheet-3.kicad_sch

ADC regulator

File: sheet-4.kicad_sch

Host chain

File: sheet-5.kicad_sch

Test points 1

File: sheet-6.kicad_sch

Test points 2

File: sheet-7.kicad_sch

PWR_FLAG

#PWR01
Host_3v3

PWR_FLAG

#PWR02
Host_5v

PWR_FLAG

#PWR03
0

PWR_FLAG

#PWR04
Hx3v3

PWR_FLAG

#PWR05
Hx5v

Host3.3V rail

Host5V rail

Host return

Host rail through passive protection/filter

Host rail through reverse-polarity MOSFET

HX711-controlled PNP collector regulator

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Sheet: /

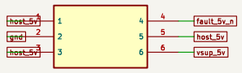
File: hx711_load_cell_amplifier.kicad_sch

Title: HX711 Load-cell amplifier v02

Size: A2	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 1/8

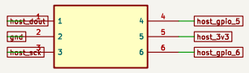
Local power 1 / WIP — same-name global labels connect

U2



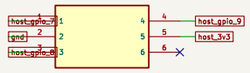
TPS2553DBVR-1

U4



TPD4E001DBVR, host protection

U5



TPD4E001DBVR, host protection

Q1



BCP51-16

D1



TPD1E10B06DYAR

D2



TPD1E10B06DYAR

D3



TPD1E10B06DYAR

R1



20.0 kΩ, 0.1%, ≤25 ppm/°C, ≥0.1 W

R2



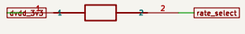
8.20 kΩ, 0.1%, ≤25 ppm/°C, ≥0.1 W

R3



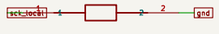
100 Ω, 1%, ≥0.25 W

R4



10.0 kΩ, 1%, ≥0.1 W

R5



47.0 kΩ, 1%, ≥0.1 W

R6



470 Ω, 1%, ≥0.1 W

R7



470 Ω, 1%, ≥0.1 W

R13



100 kΩ, 1%, ≥0.1 W

SJ11



Factory-closed cut/rebridge link

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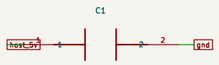
Smoothieware / CERN-OHL-S-2.0

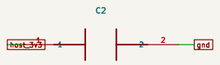
Sheet: /Local power 1/
File: sheet-1.kicad_sch

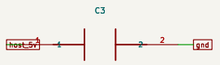
Title: Local power 1

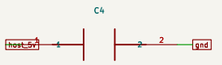
Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 2/8

Local power 2 / WIP — same-name global labels connect

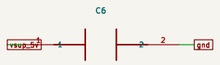


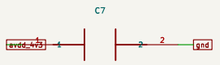


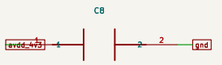


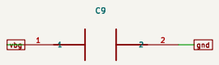






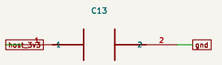


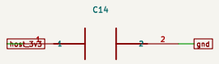












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Smoothieware / CERN-OHL-S-2.0

Sheet: /Local power 2/

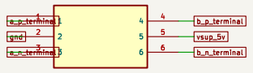
File: sheet-2.kicad_sch

Title: Local power 2

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 3/8

Analog IO / WIP — same-name global labels connect

U3



TPD4E001DBVR, analog protection

R8



100 Ω, 0.1%, ≤25 ppm/°C, ≥0.1 W

R9



100 Ω, 0.1%, ≤25 ppm/°C, ≥0.1 W

R10



100 Ω, 0.1%, ≤25 ppm/°C, ≥0.1 W

R11



100 Ω, 0.1%, ≤25 ppm/°C, ≥0.1 W

R12



0 Ω serviceable shield bond; ≥0.25 W package

C12



100 nF, X7R, 50 V

C15



100 nF, C0G, ≥16 V, ±5%

C16



100 nF, C0G, ≥16 V, ±5%

C17



1 nF, C0G, 50 V, ±1%

C18



1 nF, C0G, 50 V, ±1%

C19



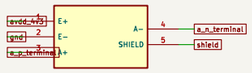
1 nF, C0G, 50 V, ±1%

C20



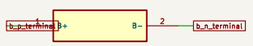
1 nF, C0G, 50 V, ±1%

J3



Phoenix PT 1,5/5-3,5-H

J4



Phoenix PT 1,5/2-3,5-H

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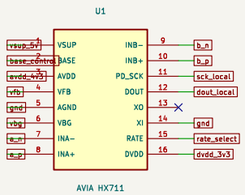
Smoothieware / CERN-OHL-S-2.0

Sheet: /Analog IO/
File: sheet-3.kicad_sch

Title: Analog IO

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 4/8

ADC regulator / WIP — same-name global labels connect



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Smoothieware / CERN-OHL-S-2.0

Sheet: /ADC regulator/
File: sheet-4.kicad_sch

Title: ADC regulator

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 5/8

Host chain / WIP — same-name global labels connect

SJ1



Closed

SJ2



Closed

SJ3



Open

SJ4



Open

SJ5



Closed

SJ6



Closed

SJ7



Closed

SJ8



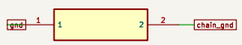
Closed

SJ9



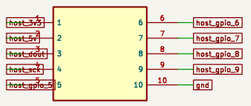
Closed

SJ10



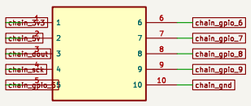
Closed

J1



Samtec SHF-105-01-L-D-TH-LC

J2



Samtec SHF-105-01-L-D-TH-LC

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Smoothieware / CERN-OHL-S-2.0

Sheet: /Host chain/
File: sheet-5.kicad_sch

Title: Host chain

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 6/8

Test points 1 / WIP — same-name global labels connect

TP1
host_3v3
host_3v3

TP13
a_p
a_p

TP2
host_5v
host_5v

TP14
a_n
a_n

TP3
host_3v3
v3_reverse

TP15
b_p
b_p

TP4
dvdd_3v3
dvdd_3v3

TP16
b_n
b_n

TP5
host_5v
v5_reverse

TP17
gnd
gnd

TP6
vsup_5v
vsup_5v

TP18
gnd
gnd

TP7
avdd_4v3
avdd_4v3

TP19
gnd
gnd

TP8
vfb
vfb

TP20
chain_3v3
chain_3v3

TP9
vbg
vbg

TP21
chain_5v
chain_5v

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Test points 1/
File: sheet-6.kicad_sch

Title: Test points 1

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 7/8

Test points 2 / WIP — same-name global labels connect

TP10

sck_local

sck_local

TP22

chain_gnd

chain_gnd

TP11

dout_local

dout_local

TP23

rate_select

rate_select

TP12

fault_5v_n

fault_5v_n

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Test points 2/

File: sheet-7.kicad_sch

Title: Test points 2

Size: A3	Date:	**Rev: v11**
KiCad E.D.A. 9.0.8		Id: 8/8