Native circuitry 1

File: rail-review-1.kicad_sch

Native circuitry 2

File: rail-review-2.kicad_sch

Native circuitry 3

File: rail-review-3.kicad_sch

Native circuitry 4

File: rail-review-4.kicad_sch

Native circuitry 5

File: rail-review-5.kicad_sch

Native circuitry 6

File: rail-review-6.kicad_sch

Native circuitry 7



File: rail-review-7.kicad_sch

Native circuitry 8



File: rail-review-8.kicad_sch

Native circuitry 9

File: rail-review-9.kicad_sch

External host supply

External host supply

External host supply

Native circuitry 10

Diode-isolated reverse auxiliary supply

Diode-isolated reverse auxiliary supply

External host supply

External host supply

File: rail-review-10.kicad_sch

Native circuitry 11

File: rail-review-11.kicad_sch

Native circuitry 12

File: rail-review-12.kicad_sch

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /

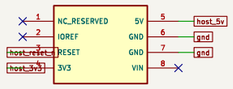
File: arduino-to-gadgeteer-shield.kicad_sch

Title: ARDUINO-TO-GADGETEER-SHIELD PROTECTION CANDIDATE

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 1/14

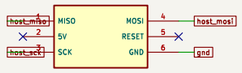
Native circuitry 1 / WIP — same-name global labels connect

JH1



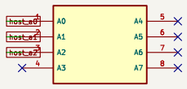
TSW-108-07-L-S

JH8



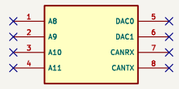
SSW-103-01-G-D

JH2



TSW-108-07-L-S

JH3



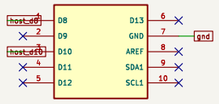
TSW-108-07-L-S

JH4



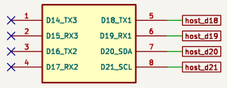
TSW-108-07-L-S

JH5



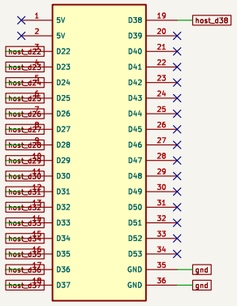
TSW-110-07-L-S

JH6



TSW-108-07-L-S

JH7



TSW-118-07-G-D

C7



100 nF 16 V X7R 10%

C8



100 nF 16 V X7R 10%

C18



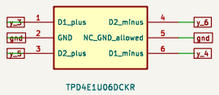
100 nF 16 V X7R 10%

C19



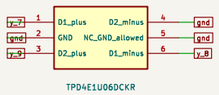
100 nF 16 V X7R 10%

D1



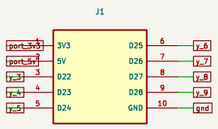
TPD4E1U06DCKR

D2



TPD4E1U06DCKR

J1



SHF-105-01-L-D-TH

R1



100 ohm 1%

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

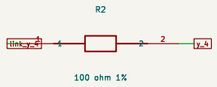
Sheet: /Native circuitry 1/

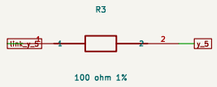
File: rail-review-1.kicad_sch

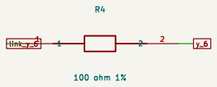
Title: Native circuitry 1

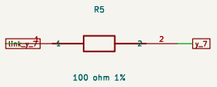
Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 2/14

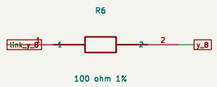
Native circuitry 2 / WIP — same-name global labels connect

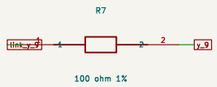


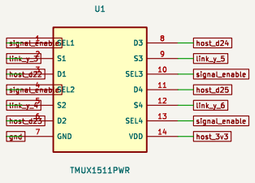


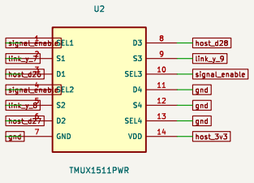


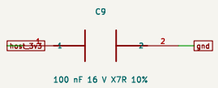


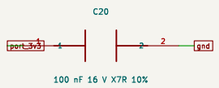


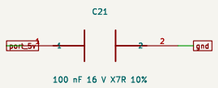








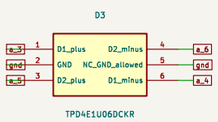


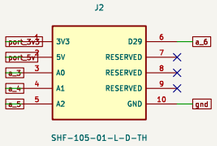












UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 2/

File: rail-review-2.kicad_sch

Title: Native circuitry 2

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 3/14

Native circuitry 3 / WIP — same-name global labels connect

R8



1 kohm 1%

R9



1 kohm 1%

R10



1 kohm 1%

R11



100 ohm 1%

TP10



Test pad

TP11



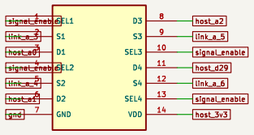
Test pad

TP12



Test pad

U3



TMUX1511PWR

C10



100 nF 16 V X7R 10%

C22



100 nF 16 V X7R 10%

C23



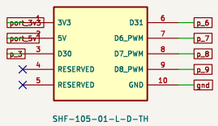
100 nF 16 V X7R 10%

D4



TPD4E1U06DCKR

J3



SHF-105-01-L-D-TH

R12



100 ohm 1%

R13



100 ohm 1%

R14



100 ohm 1%

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 3/
File: rail-review-3.kicad_sch

Title: Native circuitry 3

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 4/14

Native circuitry 4 / WIP — same-name global labels connect

R15



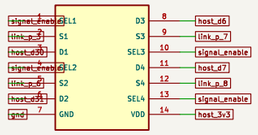
100 ohm 1%

R16



100 ohm 1%

U4



TMUX1511PWR

C11



100 nF 16 V X7R 10%

C12



100 nF 16 V X7R 10%

C24



100 nF 16 V X7R 10%

C25



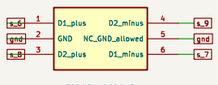
100 nF 16 V X7R 10%

D5



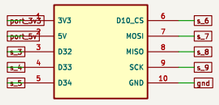
TPD4E1U06DCKR

D6



TPD4E1U06DCKR

J4



SHF-105-01-L-D-TH

R17



100 ohm 1%

R18



100 ohm 1%

R19



100 ohm 1%

R20



100 ohm 1%

R21



100 ohm 1%

R22



100 ohm 1%

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 4/
File: rail-review-4.kicad_sch

Title: Native circuitry 4

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 5/14

Native circuitry 5 / WIP — same-name global labels connect

R23



100 ohm 1%

R45



47 kohm 1%

TP13



Test pad

TP14



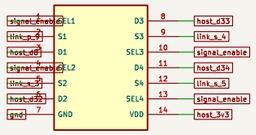
Test pad

TP15



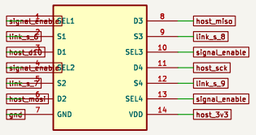
Test pad

U5



TMUX1511PWR

U6



TMUX1511PWR

C13



100 nF 16 V X7R 10%

C26



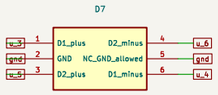
100 nF 16 V X7R 10%

C27



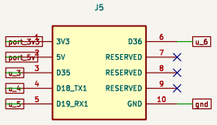
100 nF 16 V X7R 10%

D7



TPD4E1U06DCKR

J5



SHF-105-01-L-D-TH

R24



100 ohm 1%

R25



100 ohm 1%

R26



100 ohm 1%

R27



100 ohm 1%

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 5/
File: rail-review-5.kicad_sch

Title: Native circuitry 5

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 6/14

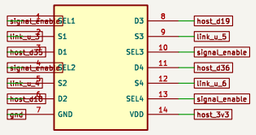
Native circuitry 6 / WIP — same-name global labels connect

R46



47 kohm 1%

U7



TMUX1511PWR

C14



100 nF 16 V X7R 10%

C28



100 nF 16 V X7R 10%

C29



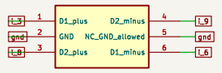
100 nF 16 V X7R 10%

C35



100 nF 16 V X7R 10%

D8



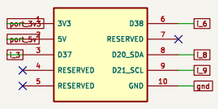
TPD4E1U06DCKR

D10



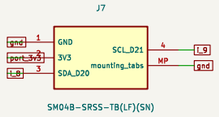
TPD4E1U06DCKR

J6



SHF-105-01-L-D-TH

J7



SM04B-SRSS-TB(LF)(SN)

R28

100 ohm 1%

R29

100 ohm 1%

R30



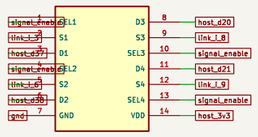
100 ohm 1%

R31



100 ohm 1%

U8



TMUX1511PWR

C1



1 uF 16 V X7R 10%

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 6/
File: rail-review-6.kicad_sch

Title: Native circuitry 6

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 7/14

Native circuitry 7 / WIP — same-name global labels connect

C3



1 uF 16 V X7R 10%

C5



4.7 uF 25 V X5R 10%

R32



7.87k 0.1%

R47



10 kohm 1%

TP1



Test pad

TP3



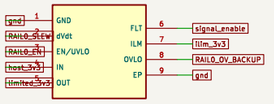
Test pad

TP5



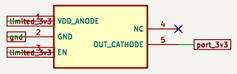
Test pad

U9



TPS259631DDAR AUTO RETRY 125mA

U11



MAX40200AUK+T

C2



1 uF 16 V X7R 10%

C4



1 uF 16 V X7R 10%

C6



4.7 uF 25 V X5R 10%

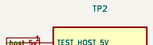
R33

7.87k 0.1%

R48

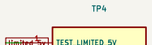
10 kohm 1%

TP2



Test pad

TP4



Test pad

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 7/
File: rail-review-7.kicad_sch

Title: Native circuitry 7

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 8/14

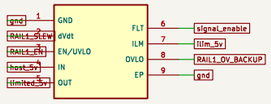
Native circuitry 8 / WIP — same-name global labels connect

TP6



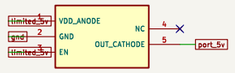
Test pad

U10



TPS259631DDAR AUTO RETRY 125mA

U12



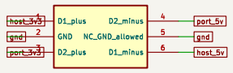
MAX40200AUK+T

C15



100 nF 16 V X7R 10%

D9



TPD4E1U06DCKR

JP1



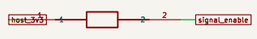
TSW-102-07-L-S

R34



4.7 kohm 1%

R35



10 kohm 1%

R36



100 kohm 1%

R41



1 kohm 1%

R42



1 kohm 1%

TP7



Test pad

TP8



Test pad

TP9



Test pad

TP16



Test pad

TP17



Test pad

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 8/

File: rail-review-8.kicad_sch

Title: Native circuitry 8

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 9/14

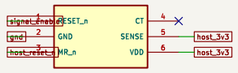
Native circuitry 9 / WIP — same-name global labels connect

TP18



Test pad

U13



TPS3808G33DBVR

C16



100 nF 16 V X7R 10%

C17



100 nF 16 V X7R 10%

C33



1 nF 50 V C0G 5%

C34



1 nF 50 V C0G 5%

R37



634 kohm 0.1%

R38



100 kohm 0.1%

R39



976 kohm 0.1%

R40



100 kohm 0.1%

R43



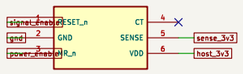
10 kohm 1%

R44



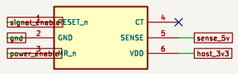
10 kohm 1%

U14



TPS3808G01DBVR

U15



TPS3808G01DBVR

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Smoothieware / CERN-OHL-S-2.0

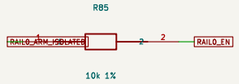
Sheet: /Native circuitry 9/
File: rail-review-9.kicad_sch

Title: Native circuitry 9

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 10/14

Native circuitry 10 / WIP — same-name global labels connect





UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

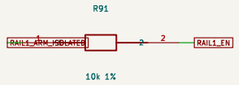
Sheet: /Native circuitry 10/
File: rail-review-10.kicad_sch

Title: Native circuitry 10

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 11/14

Native circuitry 11 / WIP — same-name global labels connect





UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

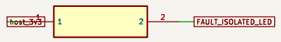
Sheet: /Native circuitry 11/
File: rail-review-11.kicad_sch

Title: Native circuitry 11

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 12/14

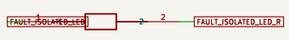
Native circuitry 12 / WIP — same-name global labels connect

JP83



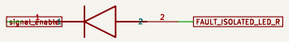
CUT TO DISABLE FAULT_ISOLATED

R96



2.2k 1%

D89



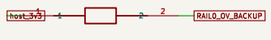
RED FAULT OR ISOLATED

C120



22nF 25V X7R

R120



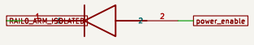
20.4k 0.1%

R121



10k 0.1%

D120



BAT54H ARM ISOLATION

D121



BZT52C4V7 EN CLAMP

R122



100k 1%

C121



22nF 25V X7R

R124



10k 0.1%

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Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 12/
File: rail-review-12.kicad_sch

Title: Native circuitry 12

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 13/14

Native circuitry 13 / WIP — same-name global labels connect

D122



BAT54H ARM ISOLATION

D123



BZT52C4V7 EN CLAMP

R125



100k 1%

D131



BAT54HGW-Q RP NEGATIVE CLAMP

D132



BAT54HGW-Q RP NEGATIVE CLAMP

C130



1uF 25V X7R

C131



1uF 25V X7R

D134



BAT54HGW-Q FAULT LED ANTIPARALLEL

UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 13/

File: rail-review-13.kicad_sch

Title: Native circuitry 13

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 14/14