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

PWR_FLAG

GND

PWR_FLAG

REV_GND

File: rail-review-7.kicad_sch

PWR_FLAG

REV_VCC

PWR_FLAG

+5V_RAW

PWR_FLAG

RAIL0_RP

External or diode-isolated supply

External or diode-isolated supply

External or diode-isolated supply

External or diode-isolated supply

External or diode-isolated supply

UNFINISHED - NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

Sheet: /

File: bltouch-like-probe.kicad_sch

Title: BLTOUCH-LIKE-PROBE PROTECTION CANDIDATE

Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 1/8

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













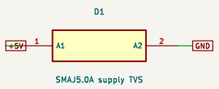


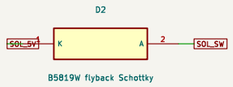


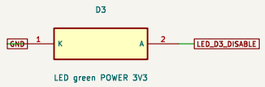


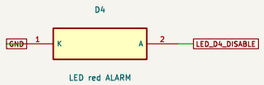


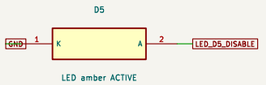












UNFINISHED — NOT FOR FABRICATION

Smoothieware / CERN-OHL-S-2.0

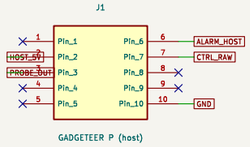
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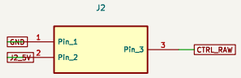
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Size: A3	Date:	**Rev: WIP**
KiCad E.D.A. 9.0.8		Id: 2/8

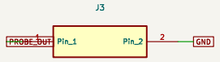
Native circuitry 2 / WIP — same-name global labels connect



GADGETEER P (host)



SERVO IN G/5V/S



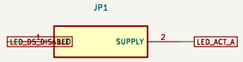
PROBE OUT S/G



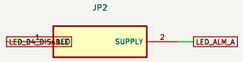
SOLENOID 5V



SWD



CUT TO DISABLE D5



CUT TO DISABLE D4



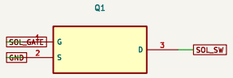
CUT TO DISABLE D3



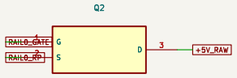
M3 hole



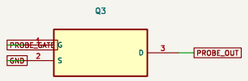
M3 hole



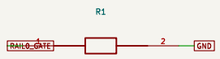
AO3400A solenoid low-side NFET



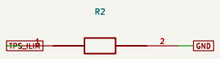
AO3401A reverse-polarity PFET



BSS138 probe open-drain NFET



100k



23.7k



100k

UNFINISHED — NOT FOR FABRICATION

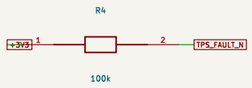
Smoothieware / CERN-OHL-S-2.0

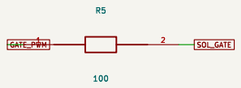
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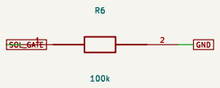
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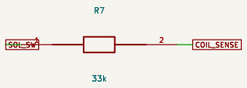
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KiCad E.D.A. 9.0.8		Id: 3/8

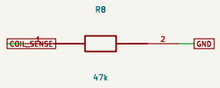
Native circuitry 3 / WIP — same-name global labels connect

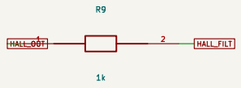




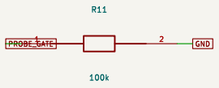


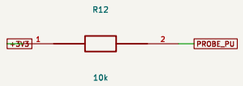


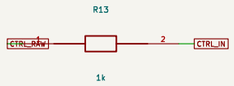


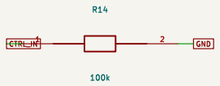


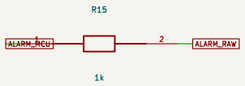








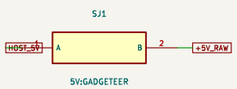












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Smoothieware / CERN-OHL-S-2.0

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: 4/8

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

SJ2



5V:SERVO-HDR

SJ3



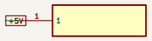
ALARM:J1.6

SJ4



PULLUP:10K

TP1



TP 5V

TP2



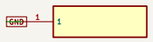
TP 3V3

TP3



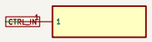
TP GND

TP4



TP GND

TP5



TP CMD

TP6



TP PROBE

TP7



TP HALL

TP8



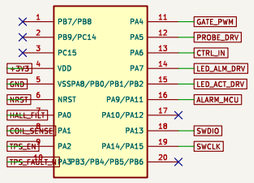
TP SOL−

TP9



TP SOL+

U1



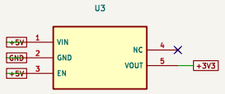
STM32G030F6P6 MCU

U2



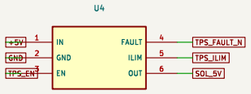
DRV5055A2 linear Hall

U3



AP2112K-3.3 LDO

U4



TPS2553 AUTO RECOVER COIL LIMIT

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Smoothieware / CERN-OHL-S-2.0

Sheet: /Native circuitry 4/

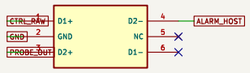
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Title: Native circuitry 4

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

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

U5



TPD4E1U06 ESD array

RB0



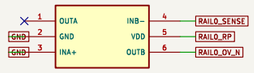
1k 1%

DB0



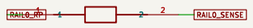
BZX384-B6V8,115

U80



TPS3700DDCR OV CUTOFF

R81



125k 0.1%

RB2



10k 0.1%

CB0



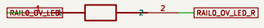
100nF 25V X7R

JP80



CUT TO DISABLE RAIL0_OV PORT0

R83



2.2k 1%

DB1



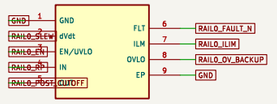
AMBER OVERVOLTAGE

RB4



0R

U81



TPS259631DDAR AUTO RETRY 1.506A NOMINAL

R85



604R 0.1%

CB1



22nF 25V X7R

CB2



1uF 25V X7R

CB3



1uF 25V X7R

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: 6/8

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

R86



39k 0.1%

R87



10k 0.1%

R88



1k 0.25W

D82



BZX384-B4V7,115

C84



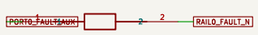
100nF 25V X7R

R89



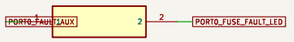
10k 1%

R90



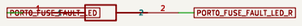
100k 1%

JP81



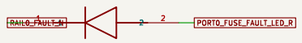
CUT TO DISABLE FUSE_FAULT PORTO

R91



2.2k 1%

D83



RED EFUSE FAULT

D131



BAT54HGW-Q RP NEGATIVE CLAMP

D133



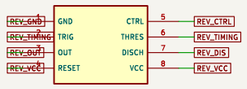
BAT54HGW-Q FAULT AUX NEGATIVE CLAMP

D134



BAT54HGW-Q FAULT LED ANTIPARALLEL

UB2



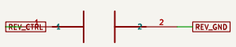
LMC555CMX/NOPB REVERSE BLINK

D85



BAT54HGW-QX

C86



10nF 25V X7R

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: 7/8

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

R93



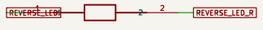
47k 1%

R94



47k 1%

R95



2.2k 1%

D130



BAT54HGW-Q REVERSE AUX NEGATIVE CLAMP

D87



RED REVERSE BLINK

C85



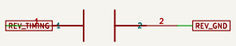
100nF 25V X7R

D84



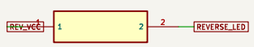
BAT54HGW-QX

C87



10uF 16V X7R

JP82



CUT TO DISABLE REVERSE

D86



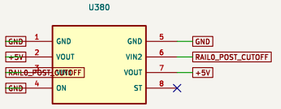
BZX384-B4V3,115

R92



1k 0.25W REVERSE AUX

U380



LM66200DRLR POST CUTOFF RCB

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: 8/8