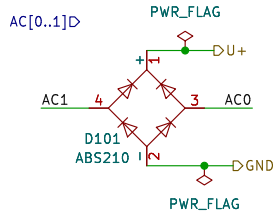
Bridge rectifier 3XS



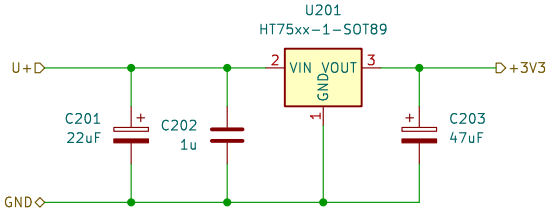
Chatelain Engineering, Bern – CH

Sheet: /rails_power_ac-dc-bridge-medium-3s/
File: rails_power_ac-dc-bridge-medium-3s.kicad_sch

Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"

Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 2/11

DC-DC voltage regulator 3.3V



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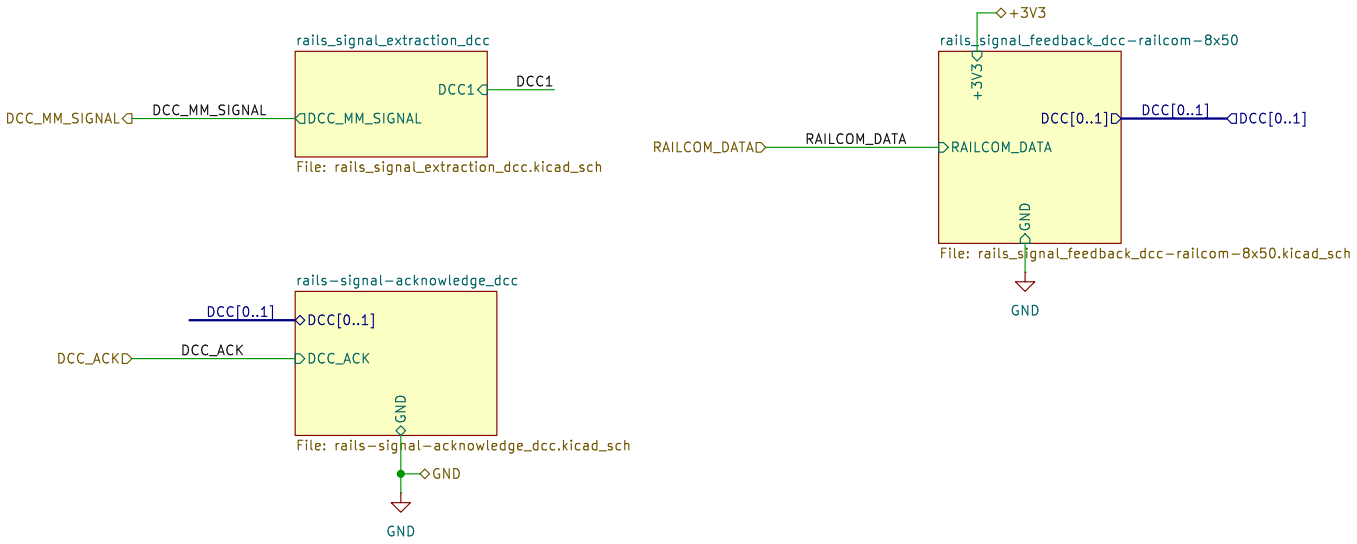
Sheet: /rails_power_dc-dc-ldo-3v3_100mA/
File: rails_power_dc-dc-ldo-3v3_100mA.kicad_sch

Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"

Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 3/11

DCC/RailCom Up– & Downlinks



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Sheet: /rails_signal_combined–medium/ File: rails_signal_combined–medium.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026–01–11	**Rev: v1.0a**
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Resistor (Use ONLY with on MCU pin protection)

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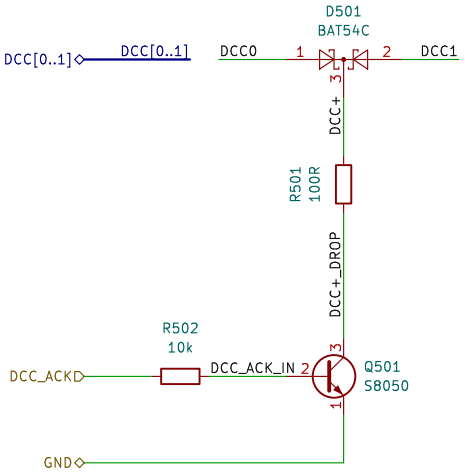
Sheet: /rails_signal_combined–medium/rails_signal_extraction_dcc/
File: rails_signal_extraction_dcc.kicad_sch

Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"

Size: A4	Date: 2026–01–11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 5/11

DCC-ACK



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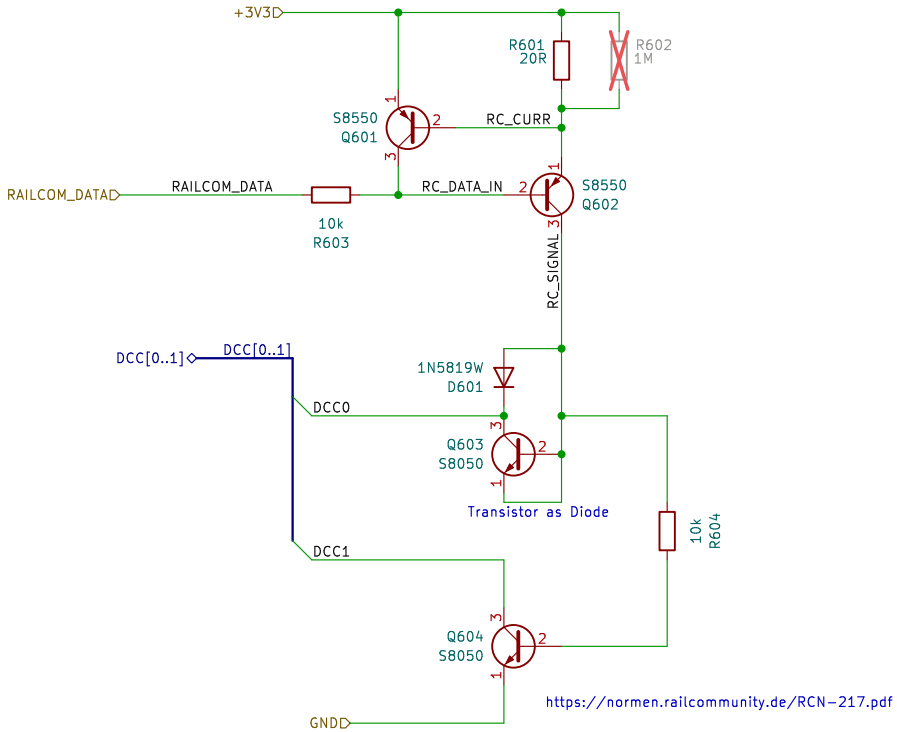
File: rails-signal-acknowledge_dcc.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 6/11

RailCom feedback generator



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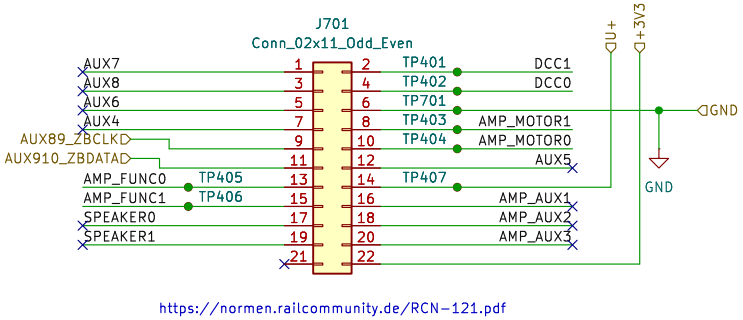
Sheet: /rails_signal_combined-medium/rails_signal_feedback_dcc-railcom-8x50/		
File: rails_signal_feedback_dcc-railcom-8x50.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 7/11

Bus interfaces

DCC[0..1]
AMP_MOTOR[0..1]
SPEAKER[0..1]
AMP_FUNC[0..1]
AUX[1..8]
AMP_AUX[1..7]

21mtc header (NEM660)



https://normen.railcommunity.de/RCN-121.pdf

Hallsensor 1	1	22		Schiene rechts
Hallsensor 2	2	21		Schiene links
Aux 6 (L)	3	20		DC (-) Funktionen GND
Aux 4 (L)	4	19		Motor rechts (+)
Zugbus Clock	5	18		Motor links (-)
Zugbus Data	6	17		Aux 5 (L) / Motor (3)
Licht hinten	7	16		DC (+) Funktionen
Licht vorne	8	15		Aux. 1
Lautsprecher 2	9	14		Aux. 2
Lautsprecher 1	10	13		Aux. 3 (L)
Verdrehschutz	11	12		Vcc +5V Prozessor

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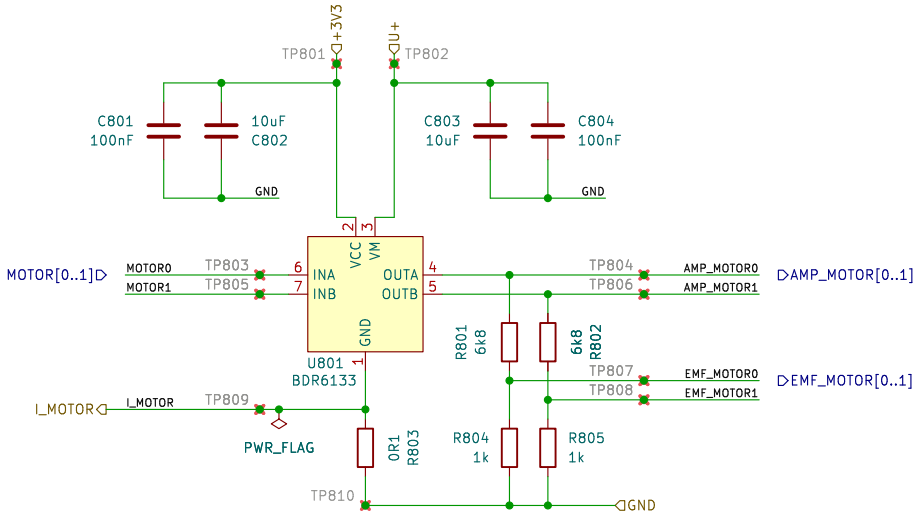
Sheet: /loco-adapter-nem660-21mtc/
File: loco-adapter-nem660-21mtc.kicad_sch
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"
Size: A4 | Date: 2026-01-11 | Rev: v1.0a
KiCad E.D.A. 8.0.8 | Id: 8/11

Motor Driver



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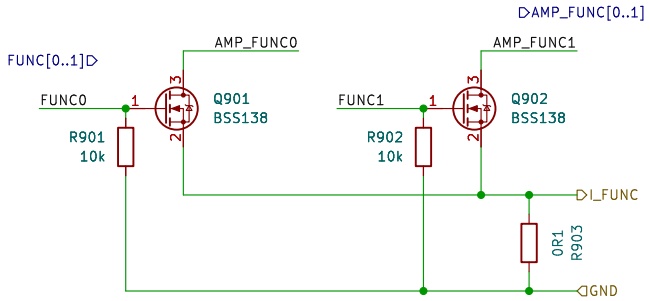
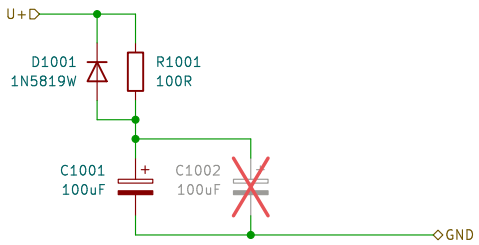
Sheet: /loco-driver-motor/		
File: loco-driver-motor.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 9/11

Output Driver

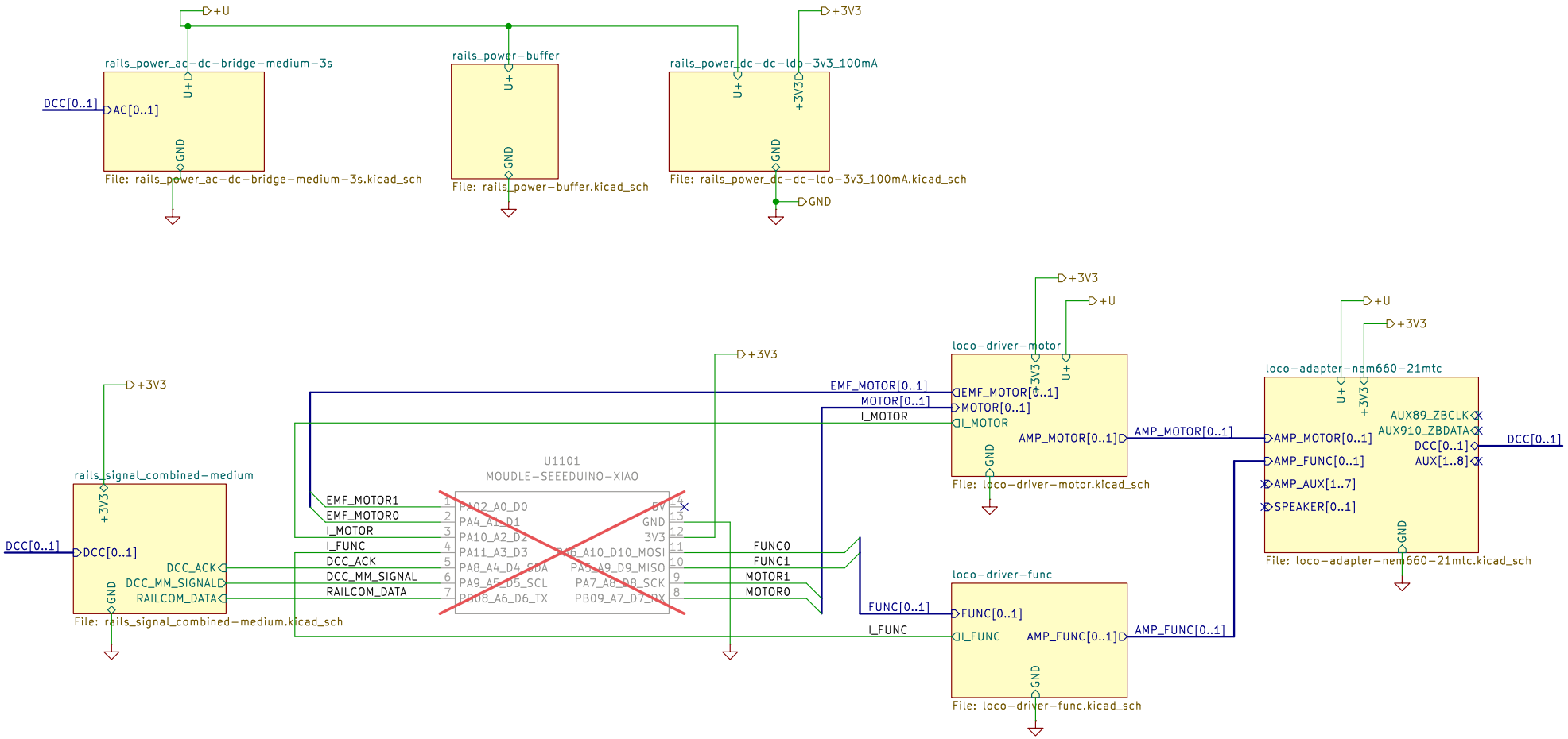


Chatelain Engineering, Bern – CH		
Sheet: /loco-driver-func/ File: loco-driver-func.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 10/11

DC storage capacitors



Chatelain Engineering, Bern – CH		
Sheet: /rails_power-buffer/ File: rails_power-buffer.kicad_sch		
Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"		
Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 11/11



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Sheet: /

File: xDuinoRails-Thor-M.kicad_sch

Title: xDuinoRail – RailcomDecoder – Development Kit "Hermes"

Size: A4	Date: 2026-01-11	**Rev: v1.0a**
KiCad E.D.A. 8.0.8		Id: 11/11