

Ground Control – RockBLOCK 9704–P

Design requirements:– https://docs.google.com/document/d/102uSy-Yxm0LSQ0DuI0Je0U-dM38gha3h9kwTfMUPbio/edit?addon_store&tab=t.0#heading=h.smt7dn6e7kfa

Design Notes

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RockBLOCK based on the 9704 module. Schematically identical to RB9704 2A, with exception of patch antenna and attenuator.

Version History

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Date,	PCB ver,	Inc,	Description
30/01/2025	1A	1	Initial creation from RB9704 (non-P). Schematic matches RB9704 1E
19/03/2025	2A	1	Add direct battery input, update pinout, add SilkScreen & Adhesive elements.

BOM Change list

PI1	20/02/2025	1A	1	Initial Creation
PI2	19/03/2025	2A	1	Separate Vbatt current limiter

Variant Options

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VARIANT should include U15A/B and one of the comms variants
E.G. <U15A RS232>

Name	Fit	Notes
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FB_PG		Resistor divider bottom connection

Top schematic



File: Top sheet.kicad_sch



Confidential

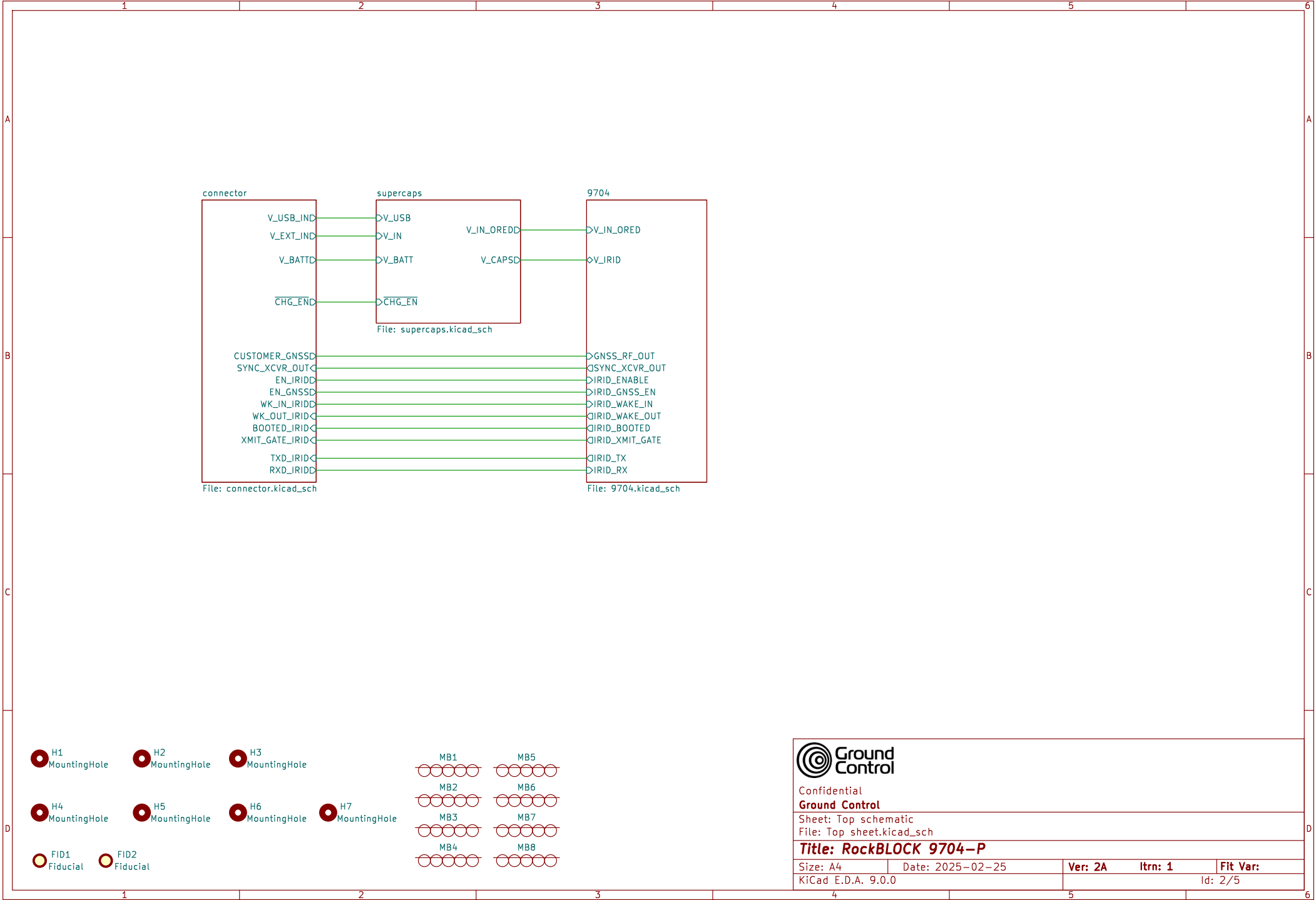
Ground Control

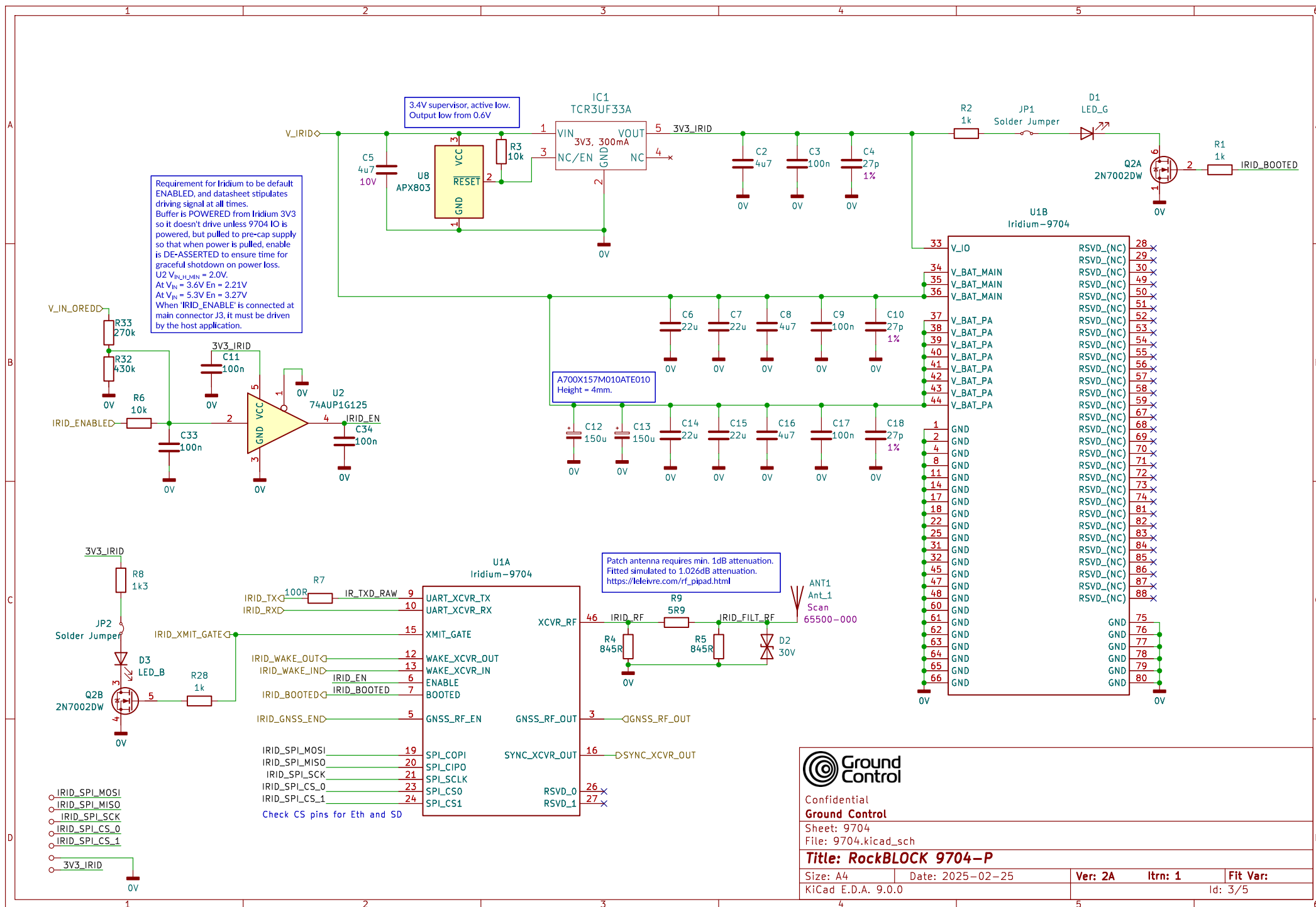
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File: rockBLOCK–9704–P.kicad_sch

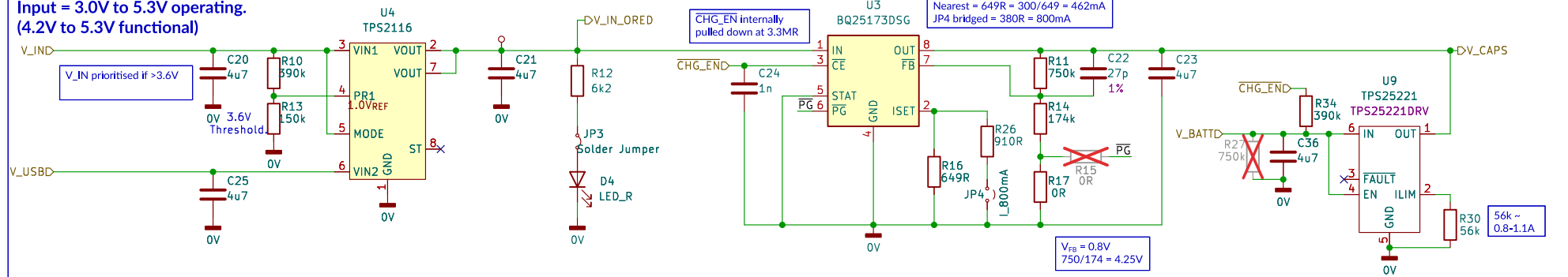
Title: RockBLOCK 9704–P

Size: A4	Date: 2025–02–25	Ver: 2A	ltn: 1	Fit Var:
KiCad E.D.A. 9.0.0				Id: 1/5

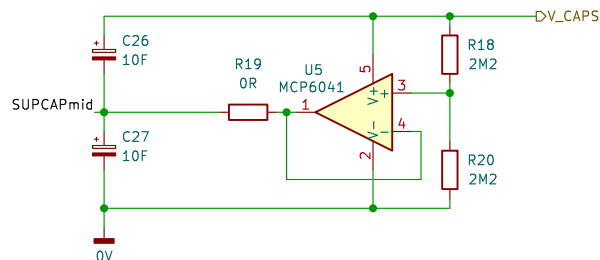




4V2 Supercap charger
BQ25173 4.2V 0.46A output
Input = 3.0V to 5.3V operating.
(4.2V to 5.3V functional)



MCP6041
 Ultra low supply current, offset and input bias current.
 600nA per channel.
 1pA input bias.
 3mV input offset.
 sink/source $10 < 17mA$.



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Ground Control

Sheet: supercaps

File: supercaps.kicad_sch

Title: RockBLOCK 9704-P

Size: A4

Date: 2025-02-25

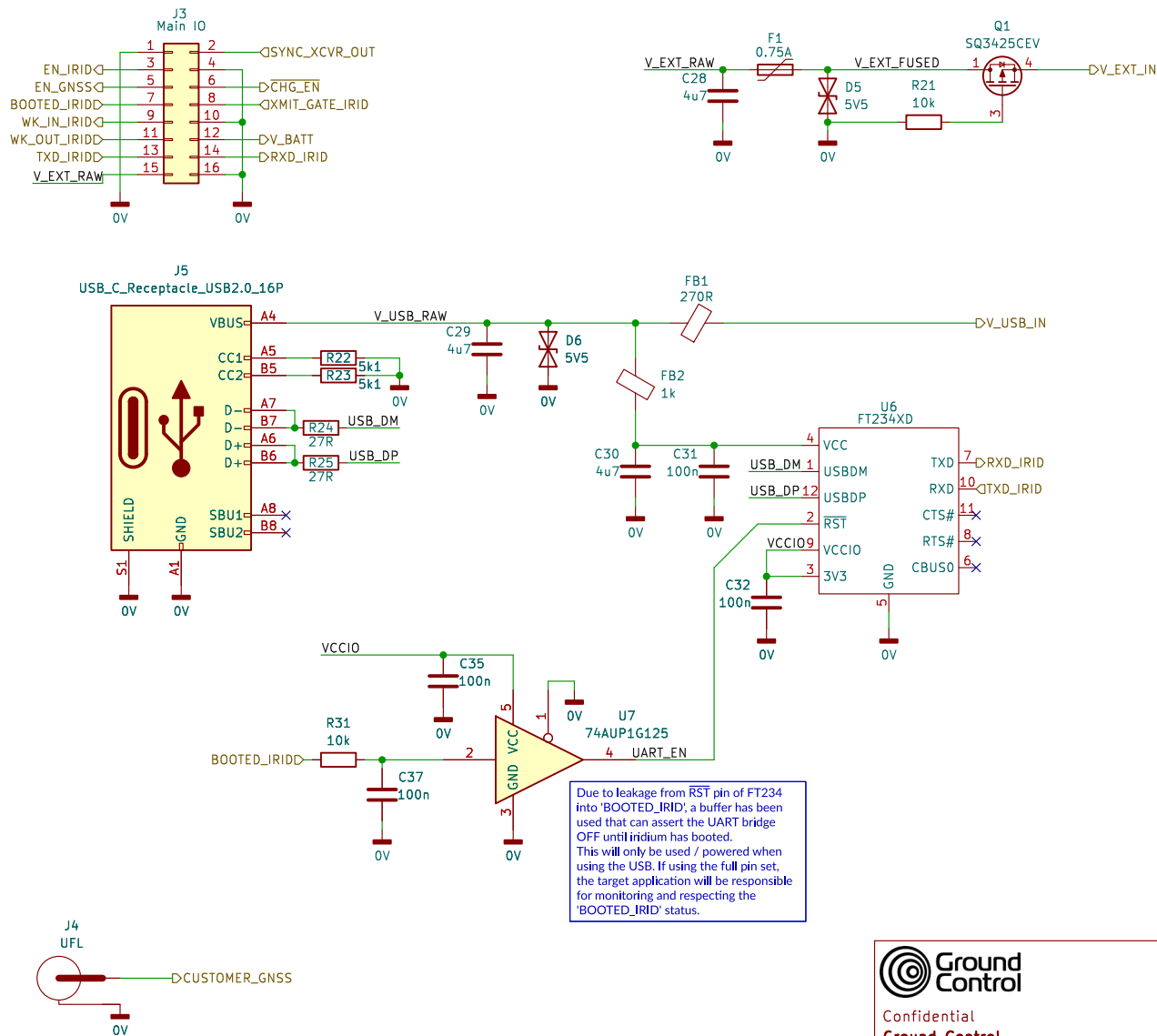
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Fit Var:

KiCad E.D.A. 9.0.0

Id: 4/5



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Ground Control

Sheet: connector

File: connector.kicad_sch

Title: RockBLOCK 9704-P

Size: A4

Date: 2025-02-25

Ver: 2A

ltnr: 1

Fit Var:

KiCad E.D.A. 9.0.0

Id: 5/5