

Mainboard

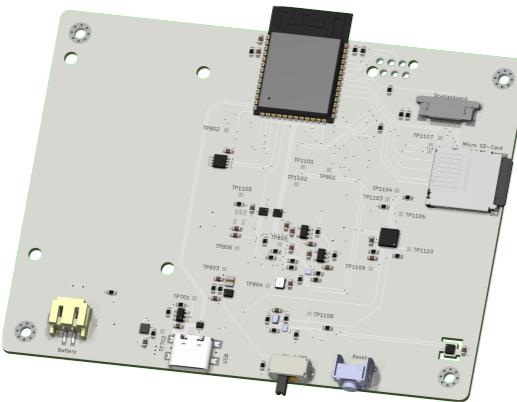
Variant: **CHECKED**

2026-01-21

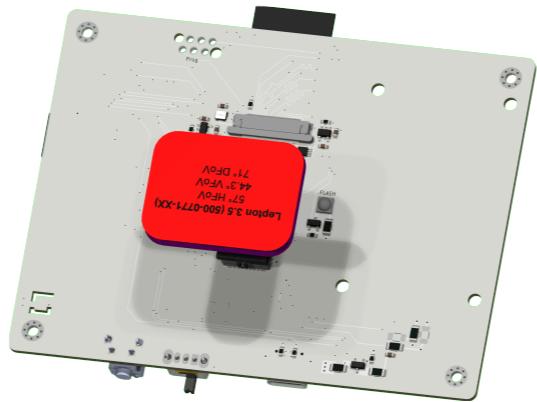
Rev 1

Page	Index	Page	Index	Page	Index	Page	Index
1	Cover Page	11	Peripherals	21	31
2	Block Diagram	12	Camera	22	32
3	Power - Topology	13	SD-Card	23	33
4	Power - Sequencing	14	Display	24	34
5	Interface - Tree	15	Revision History	25	35
6	Project Architecture	16	26	36
7	Battery	17	27	37
8	Power	18	28	38
9	MCU	19	29	39
10	Lepton	20	30	40

TOP VIEW



BOTTOM VIEW



NOTES

Comment

Not fitted components are marked as

DRAFT - Very early stage of schematic, ignore details.

PRELIMINARY - Close to final schematic.

CHECKED - There shouldn't be any mistakes. Contact the engineer if you find any.

RELEASED - A board with this schematic has been sent to production.

Date: 21-Jan-2026

DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational design notes.

DESIGN NOTE:
Example text for debug notes.

DESIGN NOTE:
Example text for cautionary design notes.

DESIGN NOTE:
Example text for critical design notes.

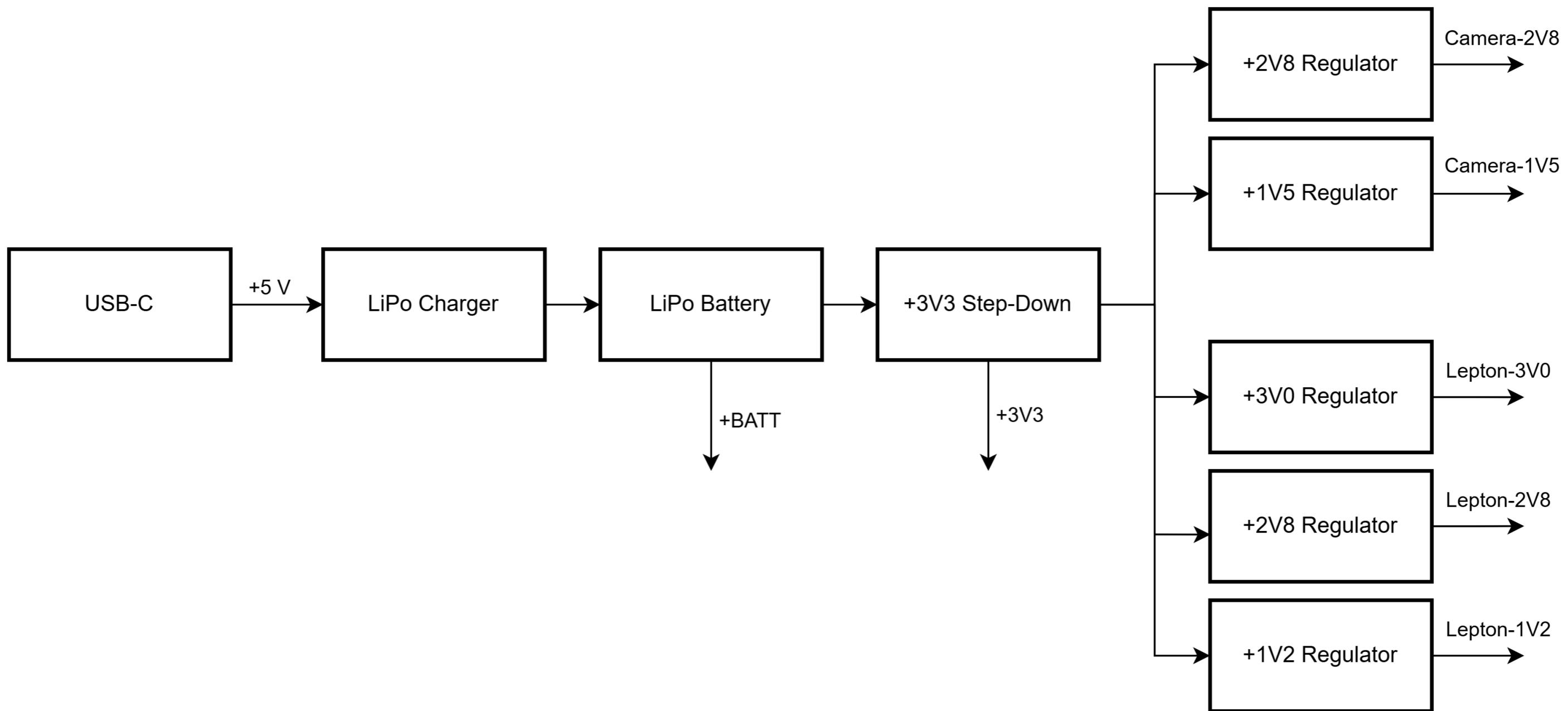
LAYOUT NOTE:
Example text for critical layout guidelines.

	Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard	Project Name: PyroVision		
	Sheet Title: Template	File Name: Mainboard.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
	Sheet Path: /	Reviewer:	Size: A3	Revision: 1 of 15

[2] Block Diagram

	Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
		Board Name: Mainboard	Project Name: PyroVision	
	Sheet Title: Block Diagram	File Name: Block Diagram.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Block Diagram/		Reviewer:	Size: A3 Sheet: 2 of 15

[3] Power - Topology



Target specifications:

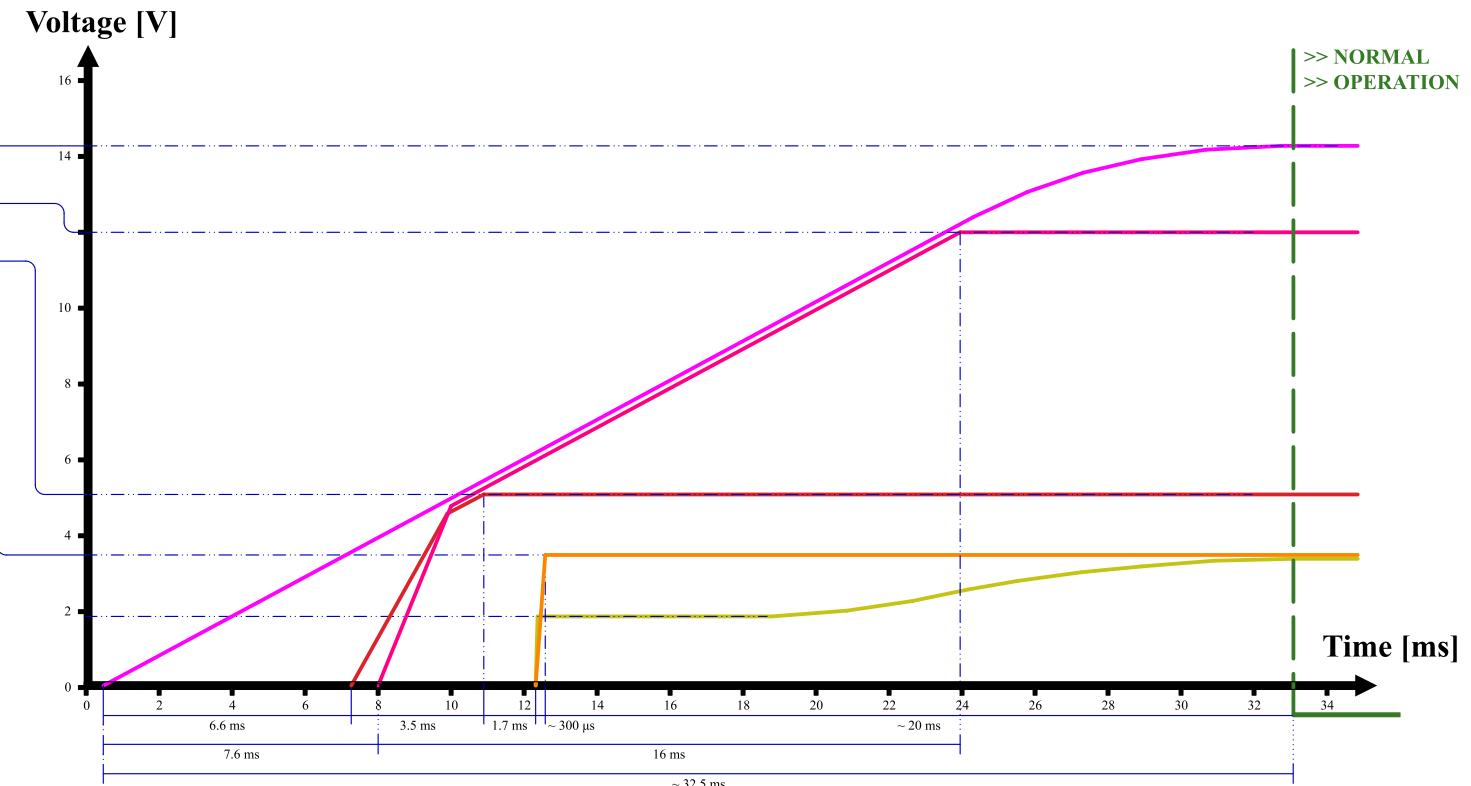
Input voltage: 5 V

Max. Input Current 540 mA

	Comments: PyroVision	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
		Board Name: Mainboard	Project Name: PyroVision	
	Sheet Title: Power - Topology	File Name: Power - Topology.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Power - Topology/	Reviewer:		Size: A3 Sheet: 3 of 15

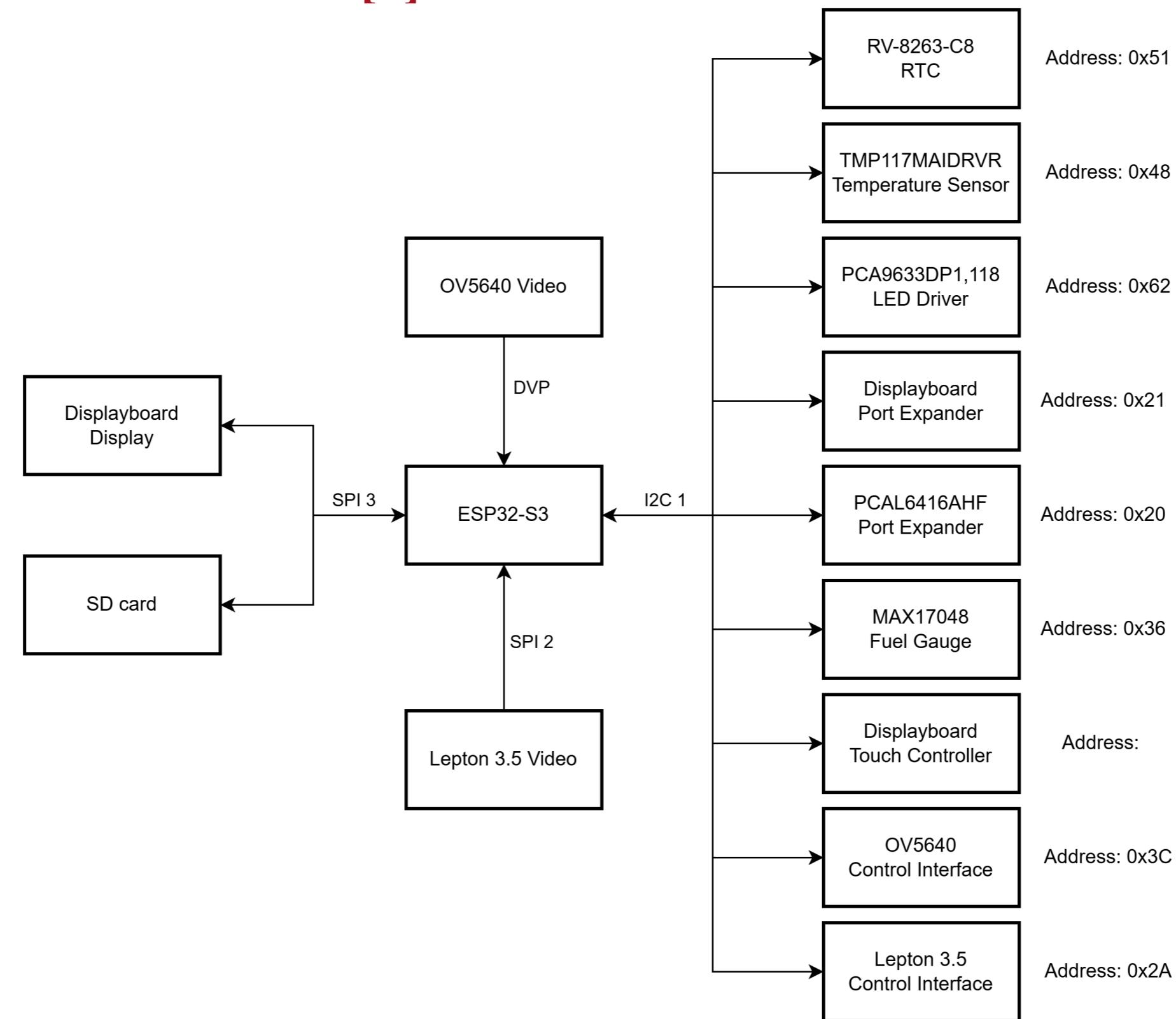
[4] Power - Sequencing

NAME	SOURCE	LEVEL
+V??	??	? - ? ± ??%
+V??	??	? - ? ± ??%
+V??	??	? - ? ± ??%
+V??	??	? - ? ± ??%
+V??	??	? - ? ± ??%



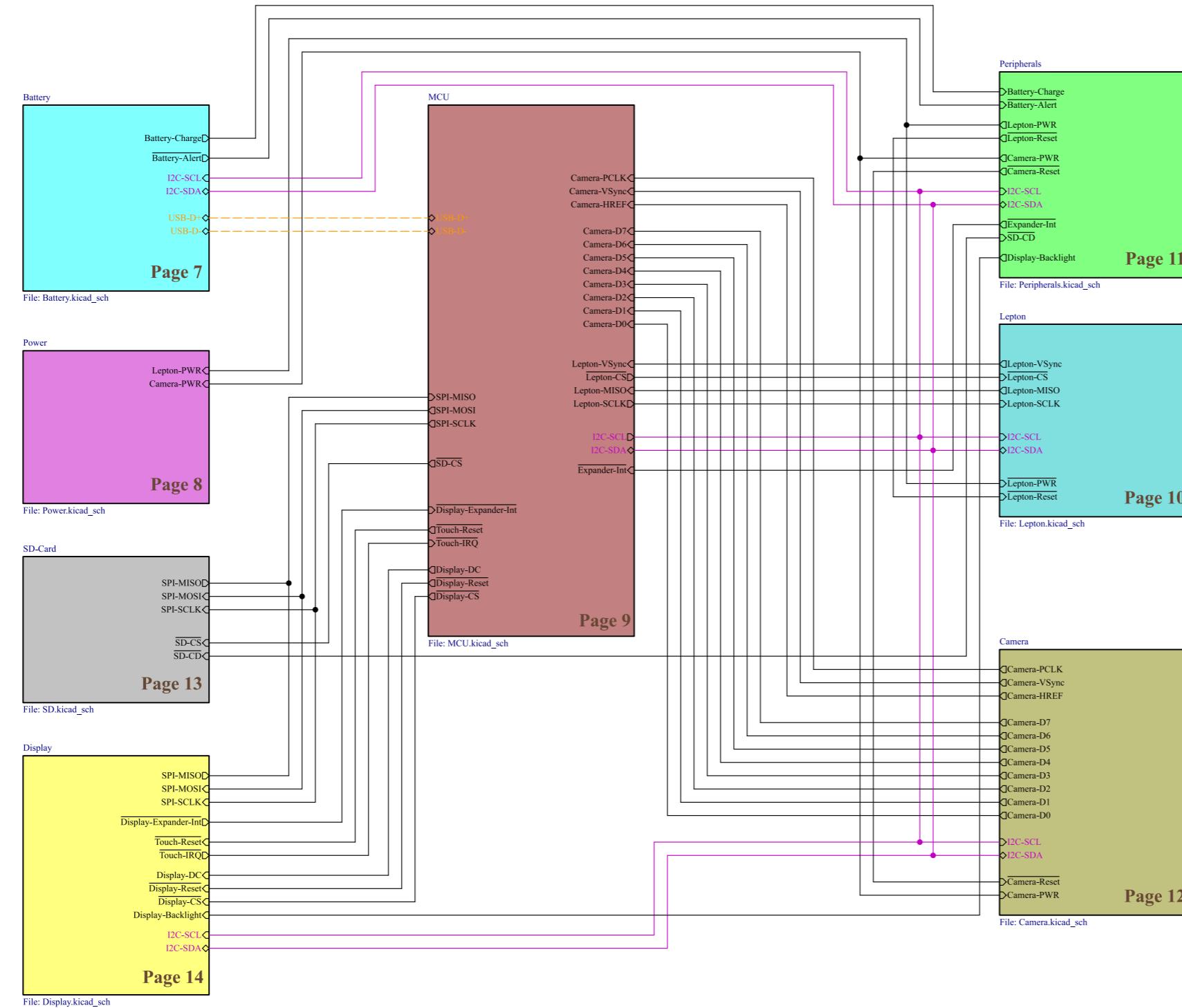
Comments:	Company: PyroVision		Variant: CHECKED	Git Hash: 965ddee
Board Name: Mainboard	Project Name: PyroVision			
Sheet Title: Power - Sequencing	File Name: Power - Sequencing.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19	Revision: 1
Sheet Path: /Power - Sequencing/	Reviewer:		Size: A4	Sheet: 4 of 15

[5] Interface - Tree



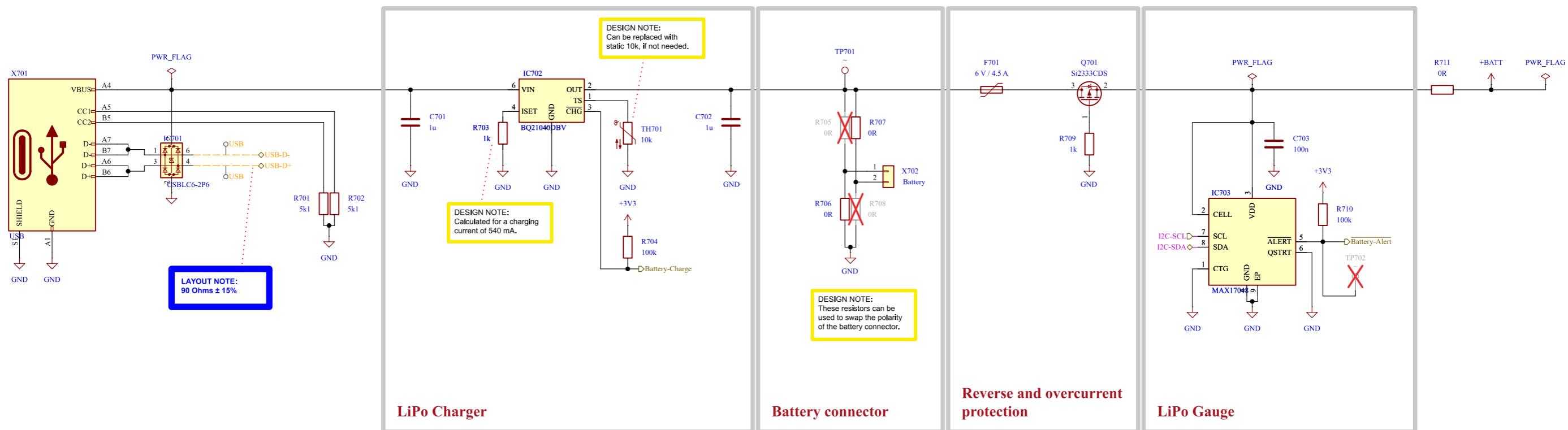
	Comments: 	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard		Project Name: PyroVision	
	Sheet Title: Interface - Tree	File Name: Interface-Tree.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Interface - Tree/		Reviewer:	Size: A3 Sheet: 5 of 15

[6] Project Architecture



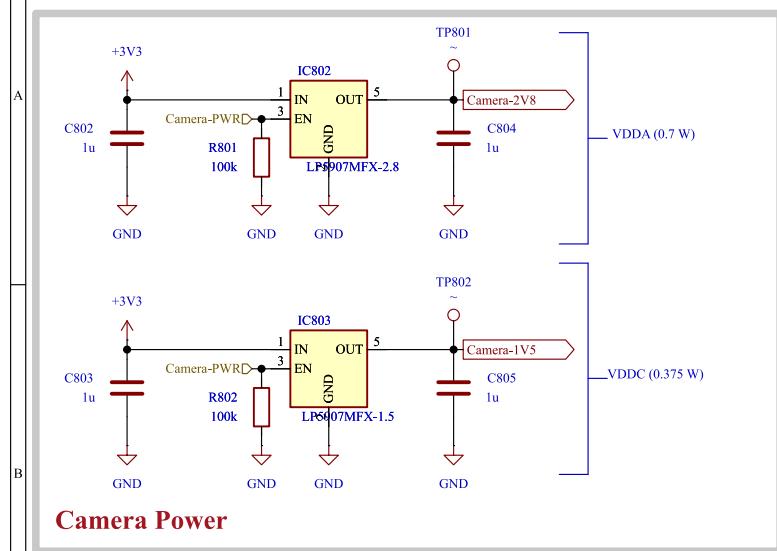
	Comments: PyroVision	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard	Project Name: PyroVision		
	Sheet Title: Project Architecture	File Name: Project Architecture.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
	Sheet Path: /Project Architecture/		Reviewer:	Size: A3 Sheet: 6 of 15

[7] Battery

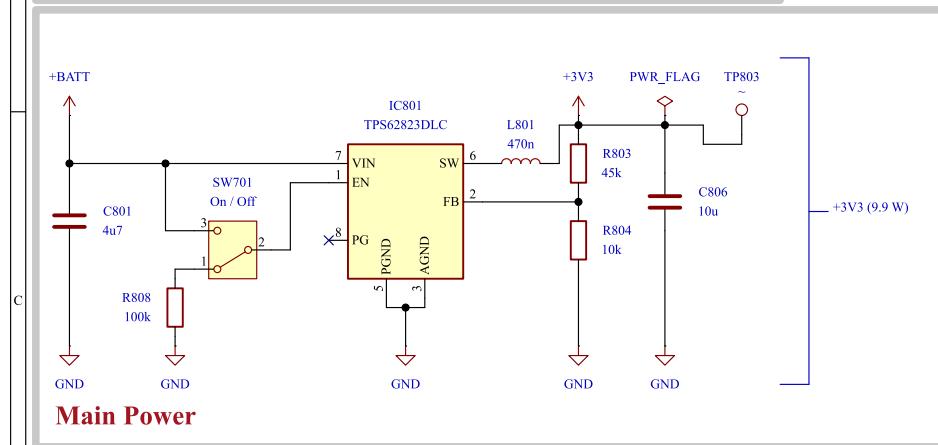


	Comments: PyroVision	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard	Project Name: PyroVision		
	Sheet Title: Battery	File Name: Battery.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
	Sheet Path: /Project Architecture/Battery/		Reviewer:	Size: A3
				Sheet: 7 of 15

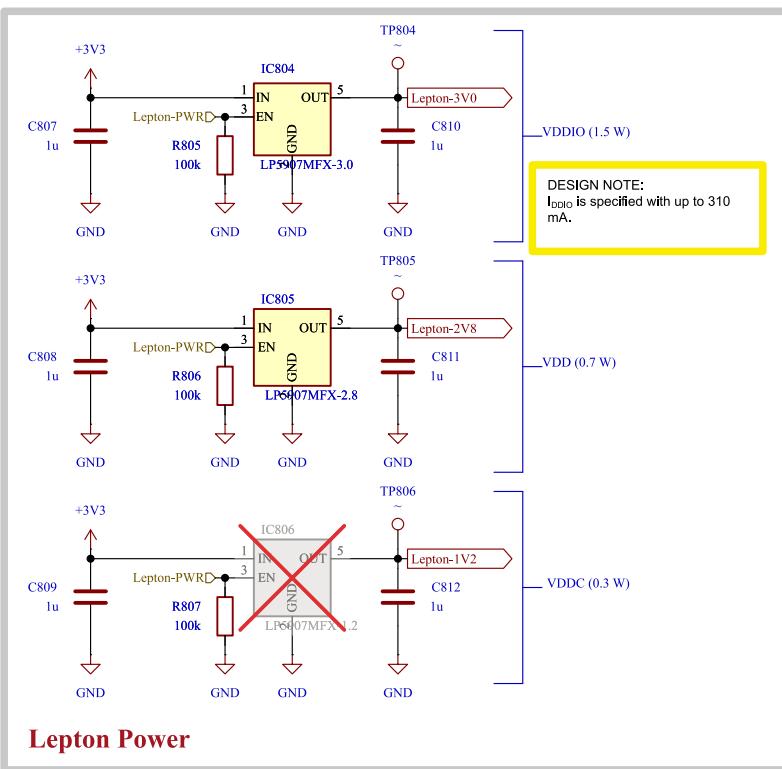
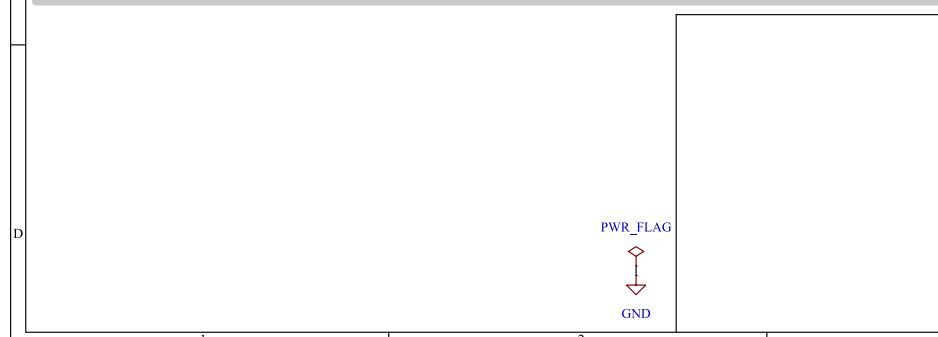
[8] Power



Camera Power

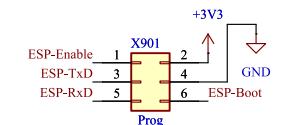
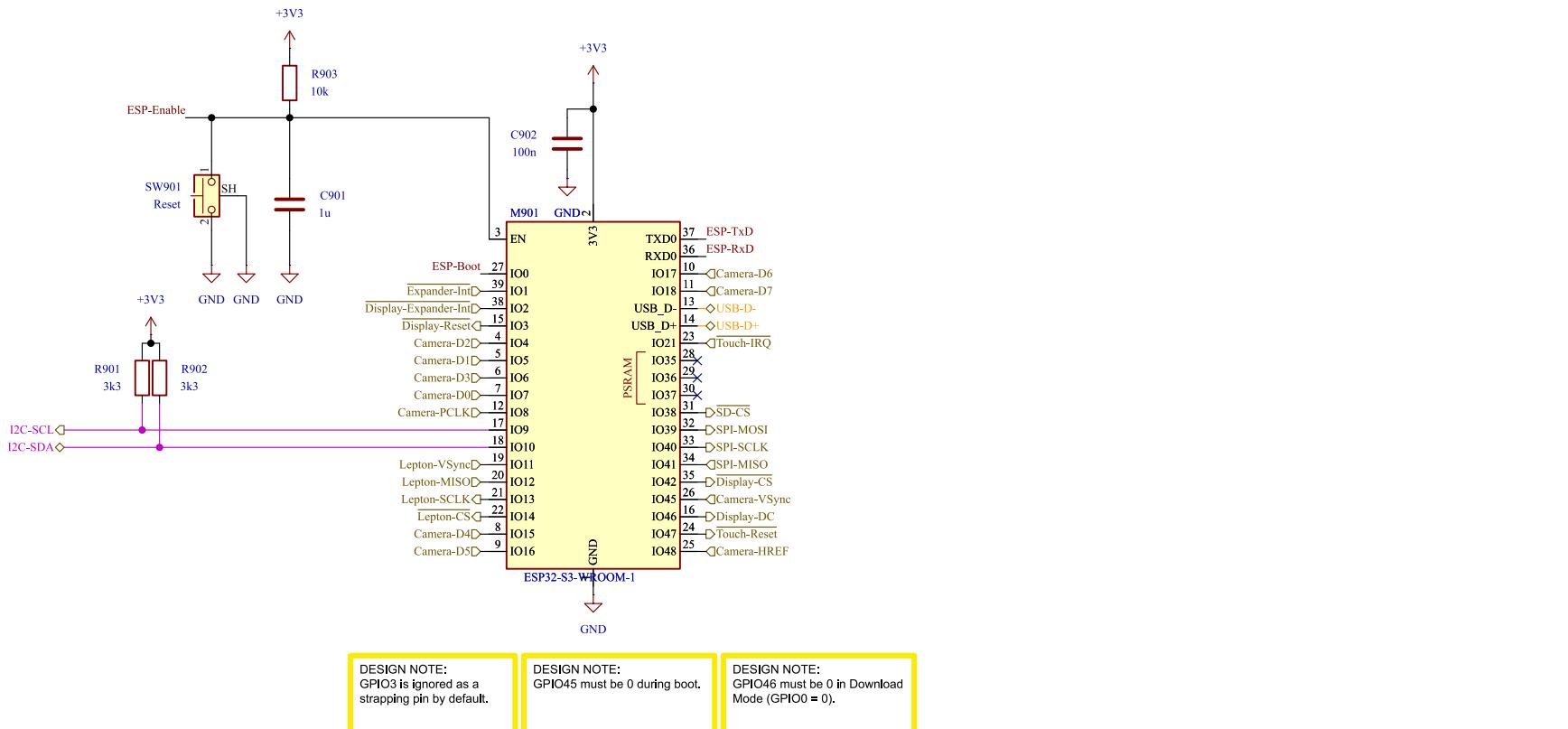


Main Power



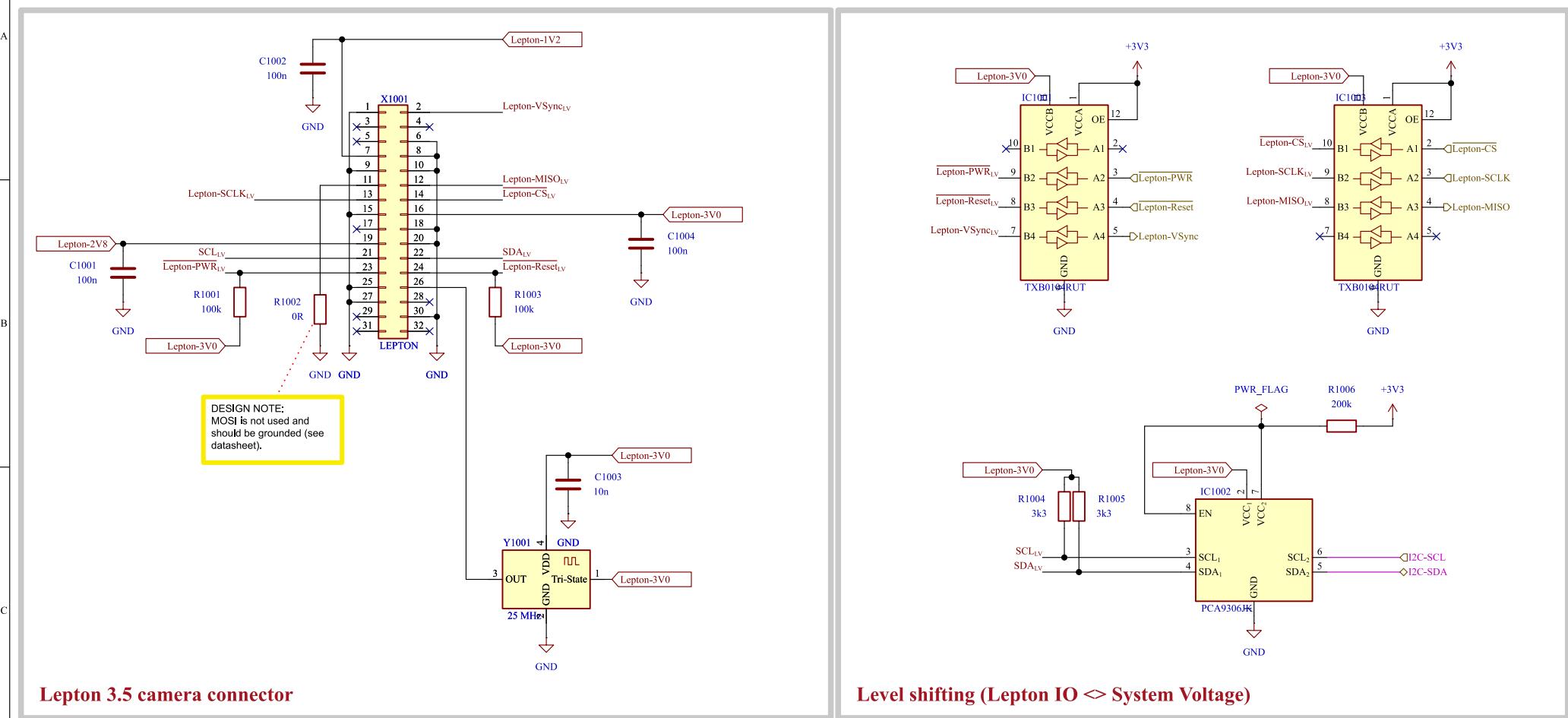
Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
Board Name: Mainboard	Project Name: PyroVision		
Sheet Title: Power	File Name: Power.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
Sheet Path: /Project Architecture/Power/	Reviewer:	Size: A4	Revision: 1 Sheet: 8 of 15

[9] MCU



	Comments: 	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard	Project Name: PyroVision		
	Sheet Title: MCU	File Name: MCU.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Project Architecture/MCU/			Reviewer: Size: A4 Sheet: 9 of 15

[10] Lepton

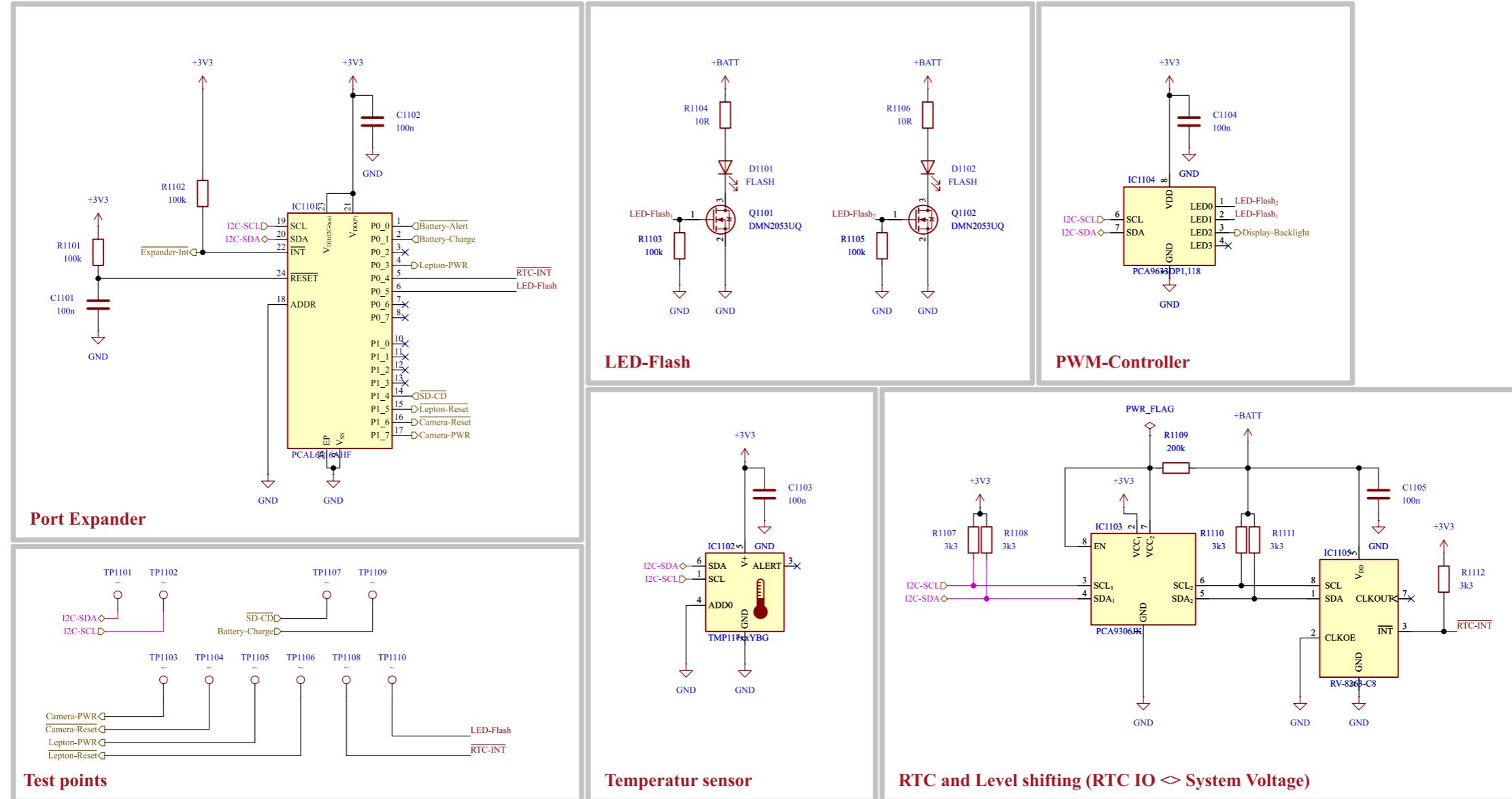


Lepton 3.5 camera connector

Level shifting (Lepton IO <→ System Voltage)

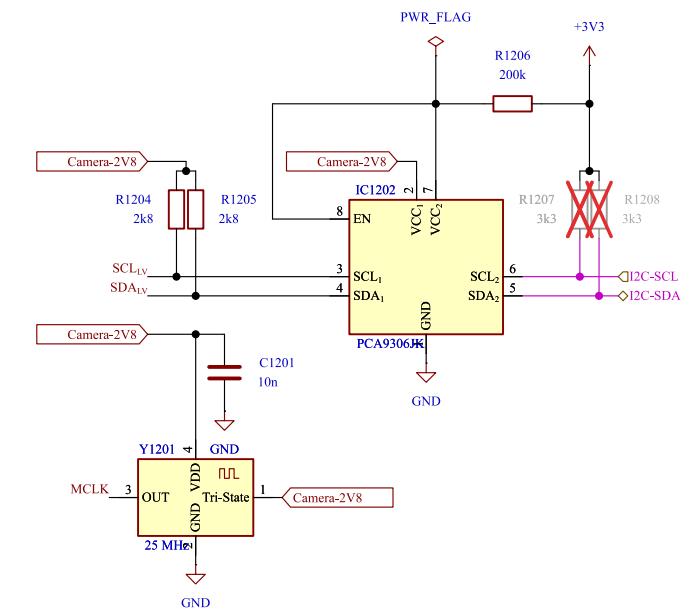
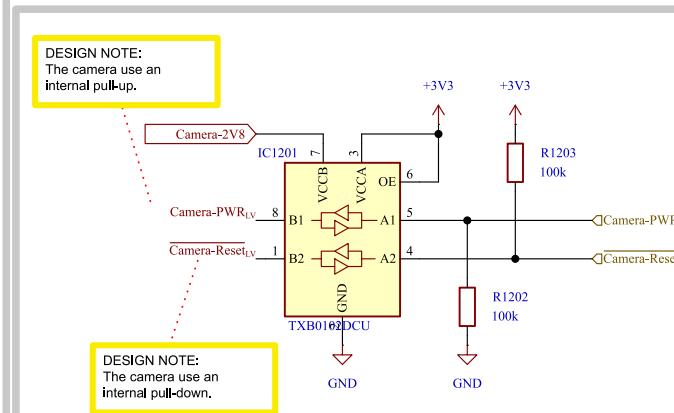
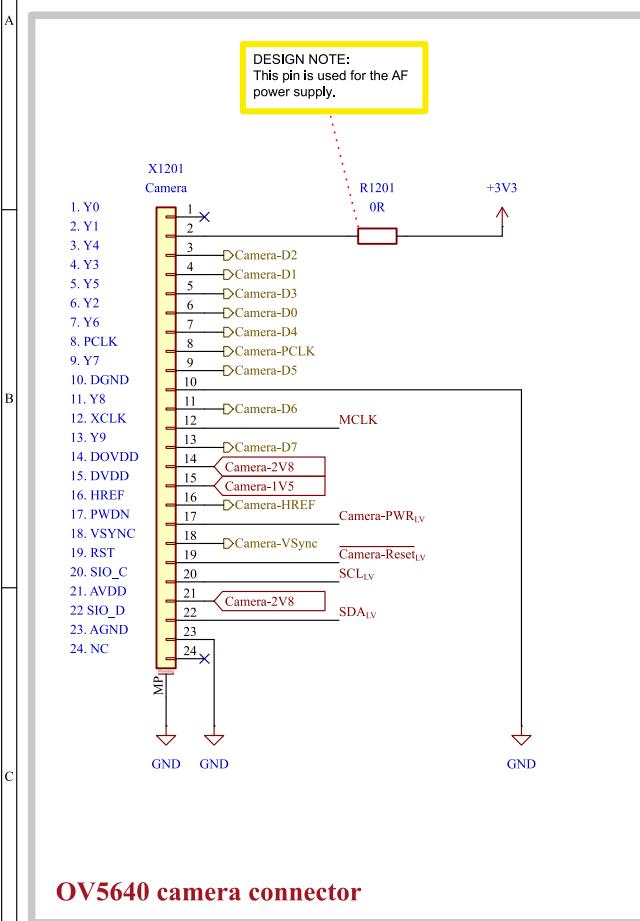
Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
Board Name: Mainboard	Project Name: PyroVision		
Sheet Title: Lepton	File Name: Lepton.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
Sheet Path: /Project Architecture/Lepton/	Reviewer:	Size: A4	Sheet: 10 of 15

[11] Peripherals



	Comments: PyroVision	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard	Project Name: PyroVision		
	Sheet Title: Peripherals	File Name: Peripherals.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Project Architecture/Peripherals/		Reviewer:	Size: A3 Sheet: 11 of 15

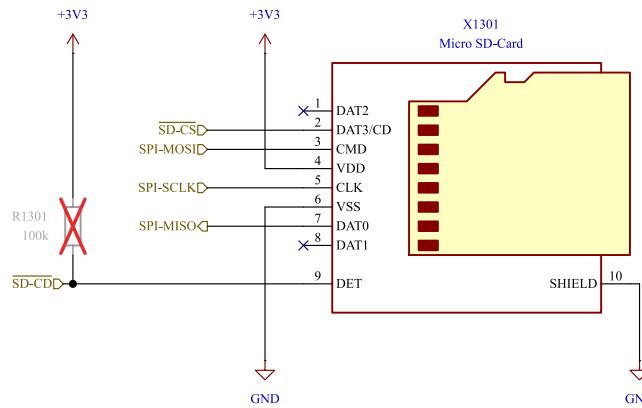
[12] Camera



Level shifting (Camera IO \leftrightarrow System Voltage)

Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
Board Name: Mainboard	Project Name: PyroVision		
Sheet Title: Camera	File Name: Camera.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19
Sheet Path: /Project Architecture/Camera/	Revision: 1		
	Reviewer:	Size: A4	Sheet: 12 of 15

[13] SD-Card



	Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard			Project Name: PyroVision
	Sheet Title: SD-Card	File Name: SD.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Project Architecture/SD-Card/		Reviewer:	Size: A4 Sheet: 13 of 15

[14] Display

A

A

B

B

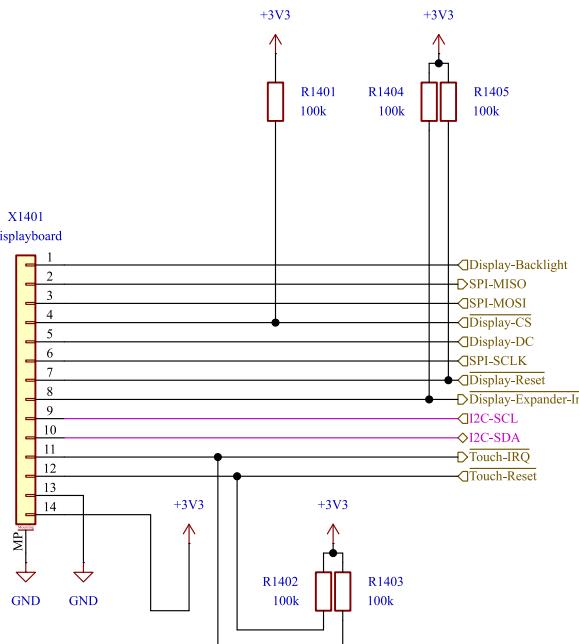
C

C

D

D

1. +3V3
 2. GND
 3. Touch-Reset
 4. Touch-IRQ
 5. SDA
 6. SCL
 7. Expander-Int
 8. Display-Reset
 9. SPI-SCLK
 10. Display-DC
 11. Display-CS
 12. SPI-MOSI
 13. SPI-MISO
 14. Display-Backlight

X1401
Displayboard

	Comments:	Company: PyroVision	Variant: CHECKED	Git Hash: 965ddee
	Board Name: Mainboard			Project Name: PyroVision
	Sheet Title: Display	File Name: Display.kicad_sch	Designer: Daniel Kampert	Date: 2025-12-19 Revision: 1
	Sheet Path: /Project Architecture/Display/		Reviewer:	Size: A4 Sheet: 14 of 15

[15] Revision History

A	<p>RELEASE_TITLE_1.0.0 \${RELEASE_BODY_1.0.0}</p>	<p>RELEASE_TITLE_1.0.1 \${RELEASE_BODY_1.0.1}</p>	<p>RELEASE_TITLE_1.0.2 \${RELEASE_BODY_1.0.2}</p>	<p>RELEASE_TITLE_1.1.0 \${RELEASE_BODY_1.1.0}</p>	A
B					B
C					C
D					D
		<p>Comments:</p>	<p>Company: PyroVision</p>	<p>Variant: CHECKED</p>	<p>Git Hash: 965ddee</p>
			<p>Board Name: Mainboard</p>	<p>Project Name: PyroVision</p>	
		<p>Sheet Title: Revision History</p>	<p>File Name: Revision History.kicad_sch</p>	<p>Designer: Daniel Kampert</p>	<p>Date: 2025-12-19</p>
		<p>Sheet Path: /Revision History/</p>		<p>Reviewer: </p>	<p>Size: A4</p>
					<p>Sheet: 15 of 15</p>