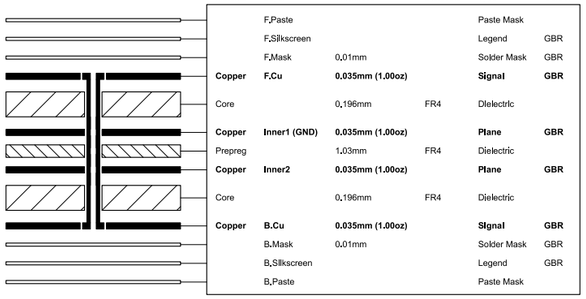
Mainboard Fabrication Document



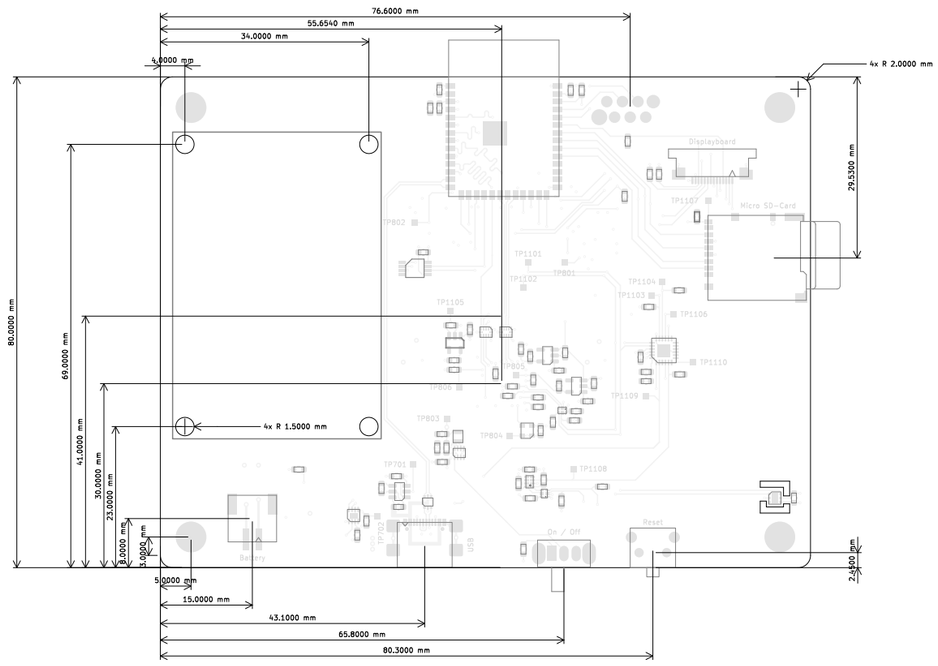
Material	Layer	Thickness	Dielectric	Type	Gerber
	F.Paste			Paste Mask	
	F.Silkscreen			Legend	GBR
	F.Mask	0.01mm		Solder Mask	GBR
Copper	**F.Cu**	**0.035mm (1.00oz)**		**Signal**	**GBR**
Core		0.196mm	FR4	Dielectric	
Copper	**Inner1 (GND)**	**0.035mm (1.00oz)**		**Plane**	**GBR**
Prepreg		1.03mm	FR4	Dielectric	
Copper	**Inner2**	**0.035mm (1.00oz)**		**Plane**	**GBR**
Core		0.196mm	FR4	Dielectric	
Copper	**B.Cu**	**0.035mm (1.00oz)**		**Signal**	**GBR**
	B.Mask	0.01mm		Solder Mask	GBR
	B.Silkscreen			Legend	GBR
	B.Paste			Paste Mask	

Total thickness: 1.582mm
Note: external layer thicknesses are specified after plating

Impedance Table

Transmission LIne	Impedance [ohms]	Tolerance [%]	Layer	Trace Width [mm]	Gap [mm]	Ref. Layers

Top Fabrication (Scale 1:1)



FABRICATION NOTES (UNLESS OTHERWISE SPECIFIED)

1) FABRICATE PER IPC-6012A CLASS 2.
2) OUTLINE DEFINED IN SEPARATE GERBER FILE WITH "Edge_Cuts.GBR" SUFFIX.

   DIMENSIONS OF CIRCUMSIZED RECTANGLE SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
3) SEE SEPARATE DRILL FILES WITH ".DRL" SUFFIX FOR HOLE LOCATIONS.

   SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
4) SURFACE FINISH: HAL LEAD-FREE
5) SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR WHITE.
6) SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING BLACK NON-CONDUCTIVE EPOXY INK.
7) ALL VIAS ARE TENTED ON BOTH SIDES UNLESS SOLDERMASK OPENED IN GERBER.
8) VENDOR SHOULD FOLLOW ROHS COMPLIANT PROCESS AND Pb FREE FOR MANUFACTURING
9) PCB MATERIAL REQUIREMENTS:
   A. FLAMMABILITY RATING MUST MEET OR EXCEED UL94V-0 REQUIREMENTS.
   B. Tg 150 C OR EQUIVALENT.
   C. EQUIVALENT MATERIAL SHALL BE RoHS COMPLIANT, HALOGEN FREE AND APPROVED BY PYROVISION.
10) DESIGN GEOMETRY MINIMUM FEATURE SIZES:

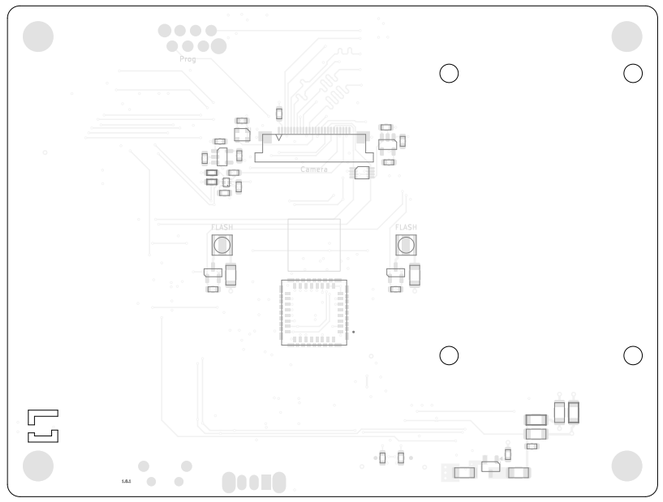
BOARD SIZE	106.000 × 80.000 mm
BOARD THICKNESS	1.582 mm
TRACE WIDTH	0.200 mm
TRACE TO TRACE	-0.000 mm
MIN. HOLE (PTH)	0.250 mm
MIN. HOLE (NPTH)	0.650 mm
ANNULAR RING	0.100 mm
COPPER TO HOLE	0.125 mm
COPPER TO EDGE	0.125 mm
HOLE TO HOLE	0.250 mm

All dimensions are in millimeters unless otherwise specified.

Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: Top Fabrication (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **1** of **10**

Mainboard Fabrication Document

Bottom Fabrication (Scale 1:1)



Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: Bottom Fabrication (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: A3	Sheet: 2 of 10

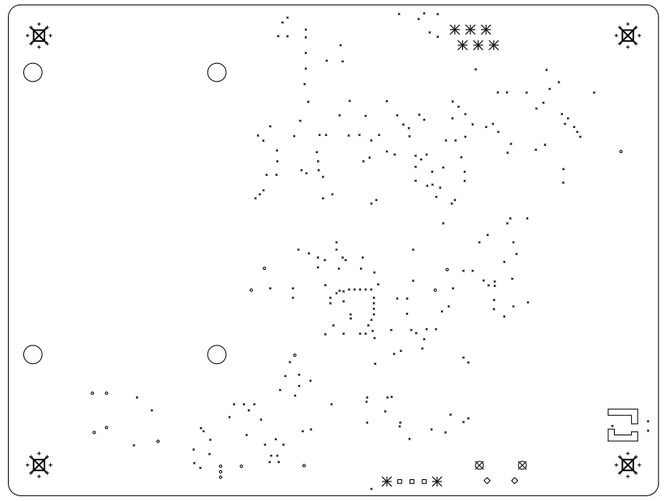
All dimensions are in millimeters unless otherwise specified.

Mainboard Fabrication Document

Drill Drawing L1 - L4 (Scale 1:1)

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
×	247	0,25mm (9,84mils)	PTH	Round	F.Cu - B.Cu	Via
○	16	0,40mm (15,75mils)	PTH	Round	F.Cu - B.Cu	Via
+	32	0,50mm (19,69mils)	PTH	Round	F.Cu - B.Cu	Pad
□	3	0,90mm (35,43mils)	PTH	Round	F.Cu - B.Cu	Pad
◇	2	1,00mm (39,37mils)	PTH	Round	F.Cu - B.Cu	Pad
⊠	2	1,30mm (51,18mils)	PTH	Round	F.Cu - B.Cu	Pad
✳	8	1,50mm (59,06mils)	PTH	Round	F.Cu - B.Cu	Pad
⊠	4	2,50mm (98,43mils)	PTH	Round	F.Cu - B.Cu	Pad
	Total 314					



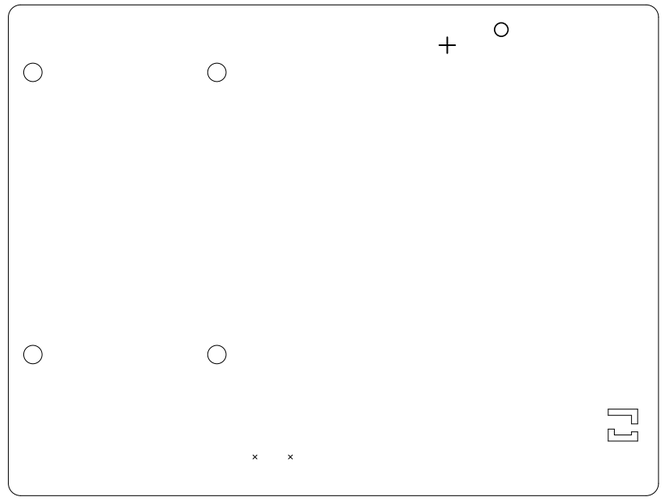
Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: Drill Drawing (L1 - L4)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **3** of **10**

Mainboard Fabrication Document

Drill Drawing L1 - L4 (Scale 1:1)

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
×	2	0,65mm (25,59mils)	NPTH	Round	F.Cu - B.Cu	Mechanical
○	1	2,20mm (86,61mils)	NPTH	Round	F.Cu - B.Cu	Mechanical
+	1	2,60mm (102,36mils)	NPTH	Round	F.Cu - B.Cu	Mechanical
	Total 4					



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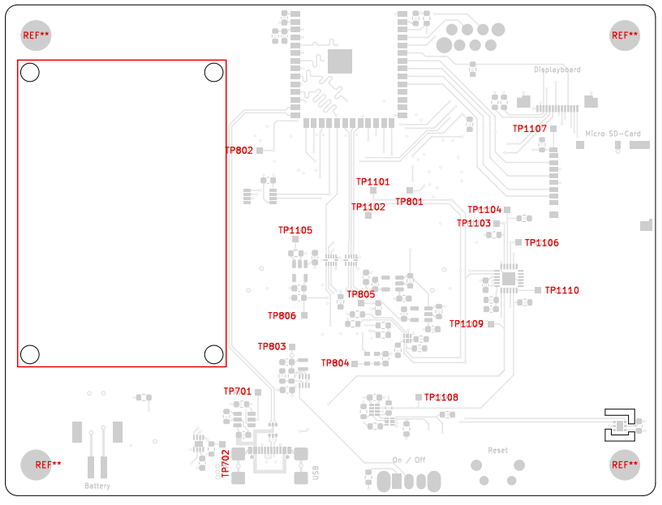
		Board Name: **Mainboard**		Project Name: **PyroVision**	
	Sheet Title: Drill Drawing (L1 - L4)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
		Sheet Path:	Reviewer:	Size: **A3**	Sheet: **4** of **10**

Mainboard Fabrication Document

Top Test Points (Scale 1:1)



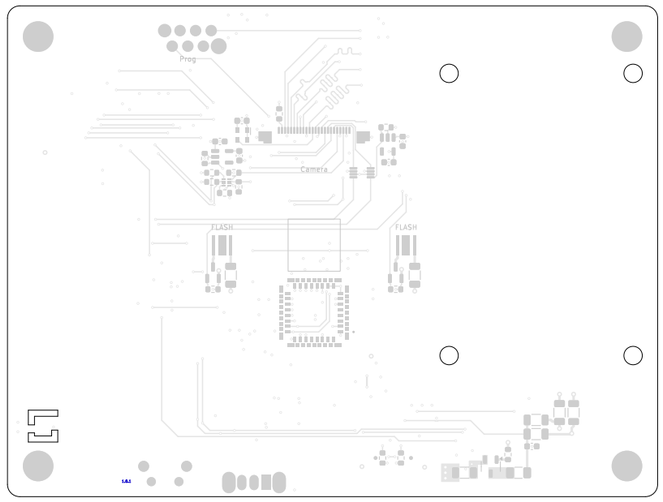
Ref.	Net	X [mm]	Y [mm]
TP701	Net-(IC702-OUT)	42.10	-68.62
TP702	Battery-Alert	36.30	-77.00
TP801	Camera-2V8	66.80	-35.73
TP802	Camera-1V5	42.40	-29.16
TP803	+3V3	47.60	-61.12
TP804	Lepton-3V0	57.90	-63.92
TP805	Lepton-2V8	58.90	-54.07
TP806	Lepton-1V2	49.57	-56.02
TP1101	I2C-SDA	60.90	-35.73
TP1102	I2C-SCL	60.10	-39.82
TP1103	Camera-PWR	81.00	-41.02
TP1104	Camera-Reset	82.75	-38.82
TP1105	Lepton-PWR	48.20	-43.62
TP1106	Lepton-Reset	84.60	-44.12
TP1107	SD-CD	90.30	-25.62
TP1108	RTC-INT	68.30	-69.33
TP1109	Battery-Charge	80.10	-57.42
TP1110	LED-Flash	87.80	-51.96

Ref.	Net	X [mm]	Y [mm]

Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: Top Test Points (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **5** of **10**

Mainboard Fabrication Document

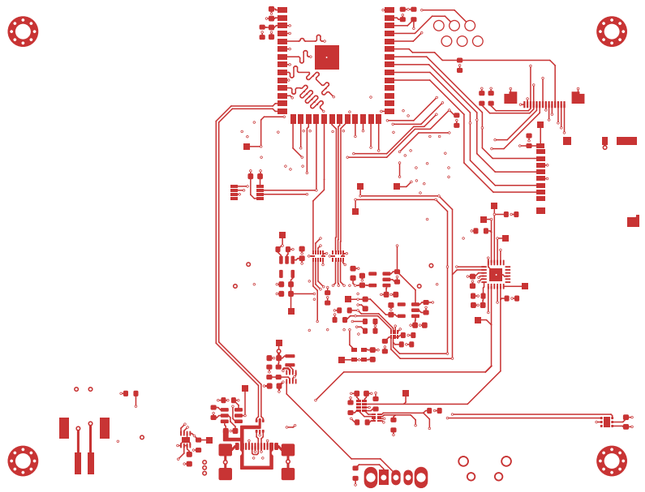
Bottom Test Points (Scale 1:1)



Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: Bottom Test Points (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **6** of **10**

Mainboard Fabrication Document

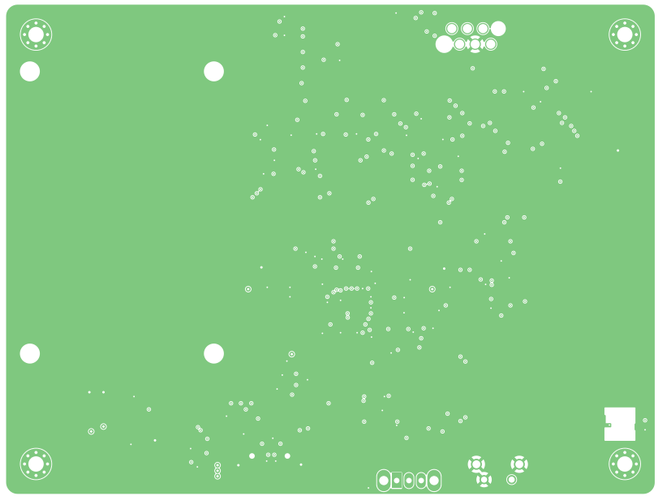
F.Cu (Scale 1:1)



Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: F.Cu (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **7** of **10**

Mainboard Fabrication Document

Inner1 (GND) (Scale 1:1)



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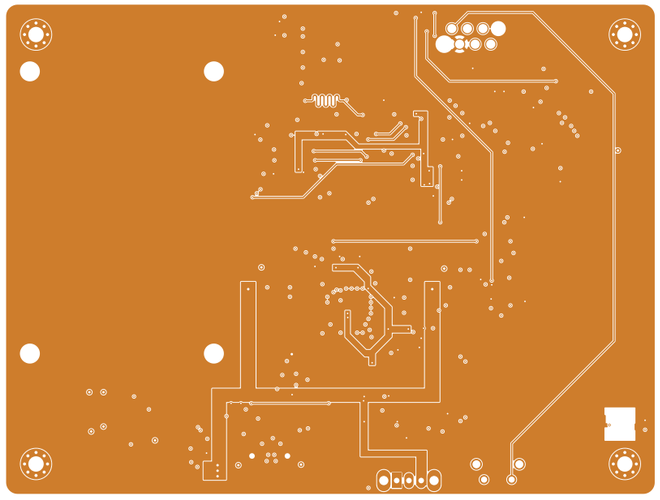
		Board Name: **Mainboard**		Project Name: **PyroVision**	
	Sheet Title: Inner1 (GND) (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
	Sheet Path:		Reviewer:	Size: **A3**	Sheet: **8** of **10**

Mainboard Fabrication Document

Inner2 (Scale 1:1)



Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0	
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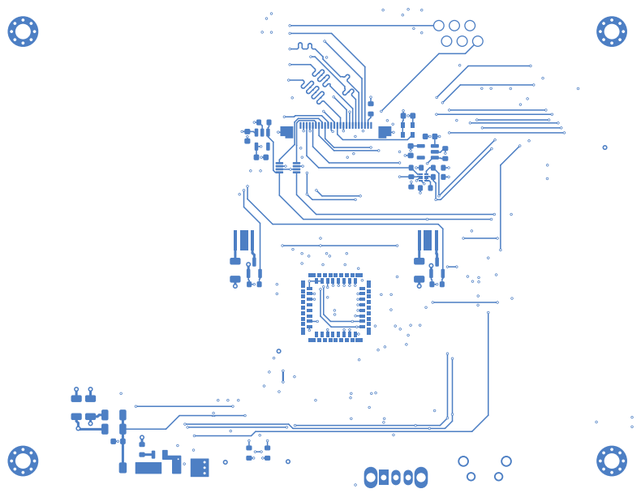
Sheet Title: Inner2 (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1	
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **9** of **10**	

Mainboard Fabrication Document

B.Cu (Scale 1:1)



Comments: PyroVision	Company: **PyroVision**		Variant: RELEASED	Git Hash: 7d35ea0
	Board Name: **Mainboard**		Project Name: **PyroVision**	
Sheet Title: B.Cu (Scale 1:1)	File Name: Mainboard.kicad_pcb	Designer: Daniel Kampert	Date: 2025-05-12	Revision: 1.0.1
Sheet Path:		Reviewer:	Size: **A3**	Sheet: **10** of **10**