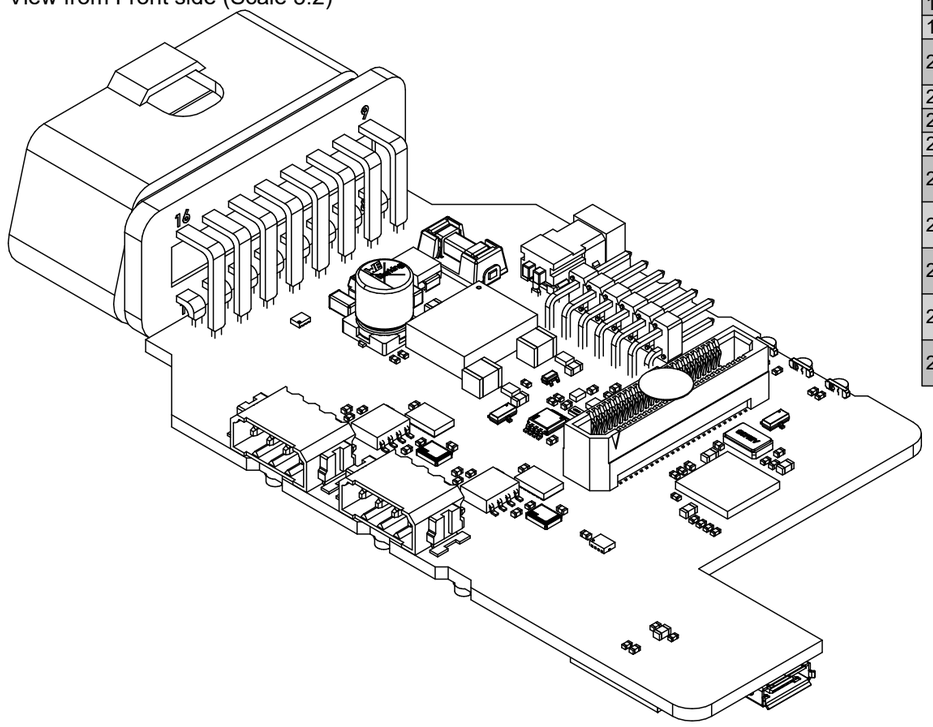
PROJECT OVERVIEW

Name: KUKSA CANOPi
Identifier: BaseBoard
Version: V1.1
Revision: A
Variant: [All Variants]
Initial Date: 1.12.2021
Plot Date: 18.01.2022 - 12:08

View from Front side (Scale 3:2)



Bill Of Materials

Line #	Designator	Comment	Quantity
1	BT700	KEYSTONE - 1060	1
2	C300, C303, C304, C305, C306, C307, C308, C309, C402, C407, C500, C501, C502, C503, C506, C507, C509, C606, C607, C610, C611, C612, C613, C614, C615, C616, C700	CAP 0402 100n -10% +10% 6.3V X7R	27
3	C301, C302, C310, C311, C405	CAP 0402 27p -2% +2% 25V C0G	5
4	C400, C403, C510, C605, C609	CAP 0603 10µF -20% +20% 6.3V X5R	5
5	C401, C404, C406, C504, C505, C508, C617	CAP 0603 1u -10% +10% 10V X7R	7
6	C511, C512	CAP 0402 15p -2% +2% 25V C0G	2
7	C600	CAP2625 47u -20% +20% 50V	1
8	C601	CAP 0603 100n -10% +10% 50V X7R	1
9	C602, C603	CAP 1206 10u -10% +10% 50V X5R	2
10	C604, C608	CAP 1210 100µF +/-20% 16V X5R	2
11	D300, D301, D500	VISHAY - VBUS052CD-FAH-GS08	3
12	D400, D602, D603	WUERTH ELEKTRONIK - 155124RS73200	3
13	D501, D605	INFINEON - BAT64-04	2
14	D502, D503, D504	WUERTH ELEKTRONIK - 155124VS73200	3
15	D600	VS-15MQ040NTRPBF	1
16	D601	STMICROELECTRONICS - SMBJ24A-TR	1
17	D604	RBE1VAM20ATR	1
18	D700	INFINEON - BAT64-05	1
19	F600	LITTELFUSE - 15403.5DRT.	1
20	FB500	MURATA - BLM18AG121SN1D	1
21	J400	629105150921	1
22	J600	694101308002	1
23	J601	AMPHENOL - 10129382	1
24	J700	SAMTEC - ERF8-025-07.0-L-DV-TR	1
25	JP500	Solder Jumper 0402 unbestückt	1
26	JP600	Solder Jumper Triple 0402 with Assembly between 1 and 2	1
27	P400	TE CONNECTIVITY - 2199119-3	1
28	Q400, Q401, Q600, Q601, Q602	DIODES INCORPORATED - 2N7002T	5

Bill Of Materials

Line #	Designator	Comment	Quantity
29	R300, R301, R303, R304, R404, R500, R501	RES 0402 60R4 1% 0W0625	7
30	R302, R305, R514, R613	RES 0402 100R 1% 63mW	4
31	R306, R307, R504, R505, R506, R509	RES 0402 10K 1% 0W0625	6
32	R400, R401, R405, R700, R701	RES 0402 4K7 1% 0W0625	5
33	R402, R508, R511, R513, R515	RES 0402 1K 1% 0W0625	5
34	R403, R600, R601, R602	RES 0402 33K 1% 0W0625	4
35	R502, R606, R607, R611, R612	RES 0402 330K 1% 0W0625	5
36	R503	RES 0402 62K 1% 0W0625	1
37	R507, R510, R512, R516, R517, R518, R519, R520, R604, R608, R609, R610, R614	RES 0402 100K 1% 0W0625	13
38	R603	RES 0402 47K5 1% 0W0625	1
39	R605	RES 0402 78K7 1% 0W0625	1
40	S600, S601	C & K - PCM12SMTR	2
41	SW500, SW600	EVQ-P7J01P	2
42	U300, U302	MICROCHIP - MCP2542FD/4FD	2
43	U301, U303	MICROCHIP - MCP2518FD	2
44	U400	ON SEMICONDUCTOR - FSUSB43L10X	1
45	U500	MCP2562-E/MF	1
46	U501	OBD SOLUTIONS - STN2120	1
47	U600	ANALOG DEVICES - LTM8024EY#PBF	1
48	U601, U602	VISHAY - SIP32408	2
49	U603, U605, U606	SN74LVC1G07DRYR	3
50	U604	SN74LVC1G27DBVR	1
51	U700	PCF85063ATT/AJ	1
52	X300, X301	PHOENIX CONTACT - PTSM 0,5/ 4-HH-2,5-SMD R32	2
53	X400	JST - SCZW-7SA-1K(HF)	1
54	X500	ABM3B-16.000MHZ-B2-T	1
55	X501	COMTECH ELECTRONIC - OBD-2 Stiftblock	1
56	Y300, Y301	ECS-200-18-33Q-DS	2
57	Y700	ABRACON - ABS05-32.768KHZ-9-T	1

Project: KUKSA CANOPi
Identifier: BaseBoard Version: V1.1 Revision: A Variant: [All Variants]

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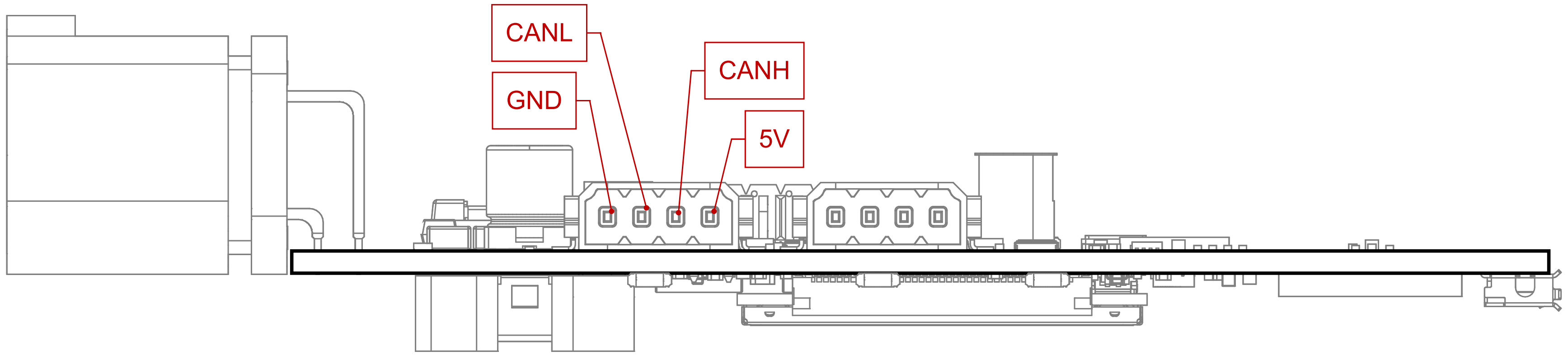
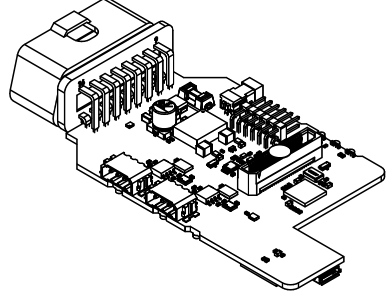
PCBA VIEW 1

View from Front side (Scale 2:1)



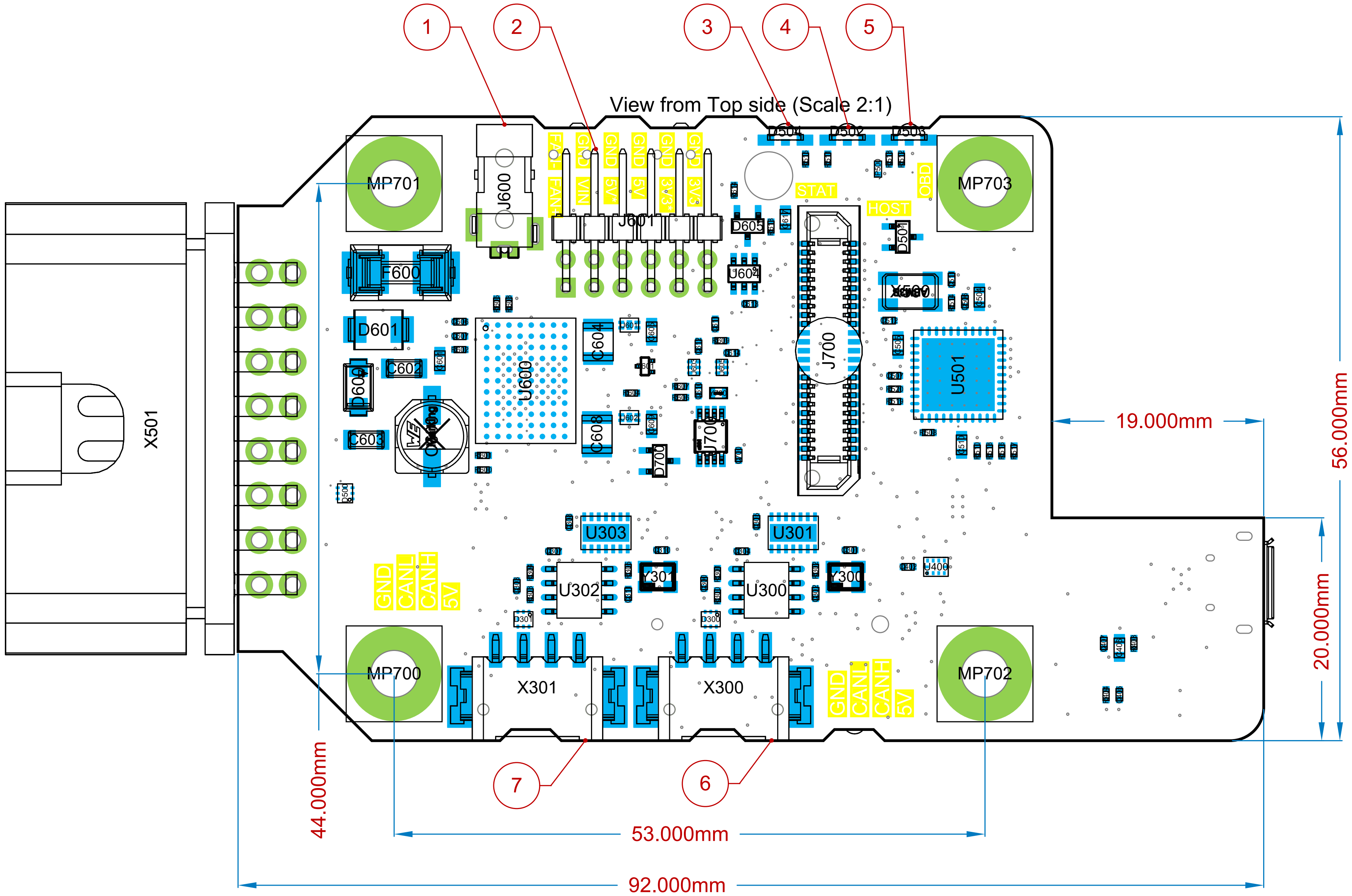
View from Front side (Scale 0.5)



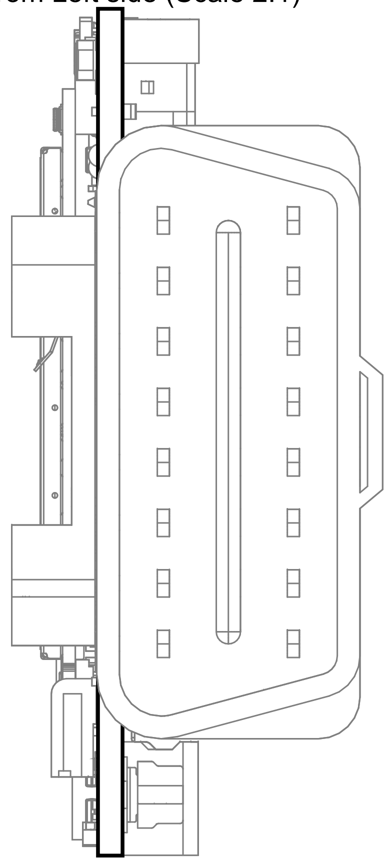
Notes:

1. DC Power jack (3.5mm OT)
2. Power connectors
3. OBD Status LED
4. OBD Host active LED
5. OBD Activity LED
6. CAN FD Connector
7. CAN FD Connector

View from Top side (Scale 2:1)



View from Left side (Scale 2:1)



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Identifier: BaseBoard Version: V1.1 Revision: A Variant: [All Variants]			
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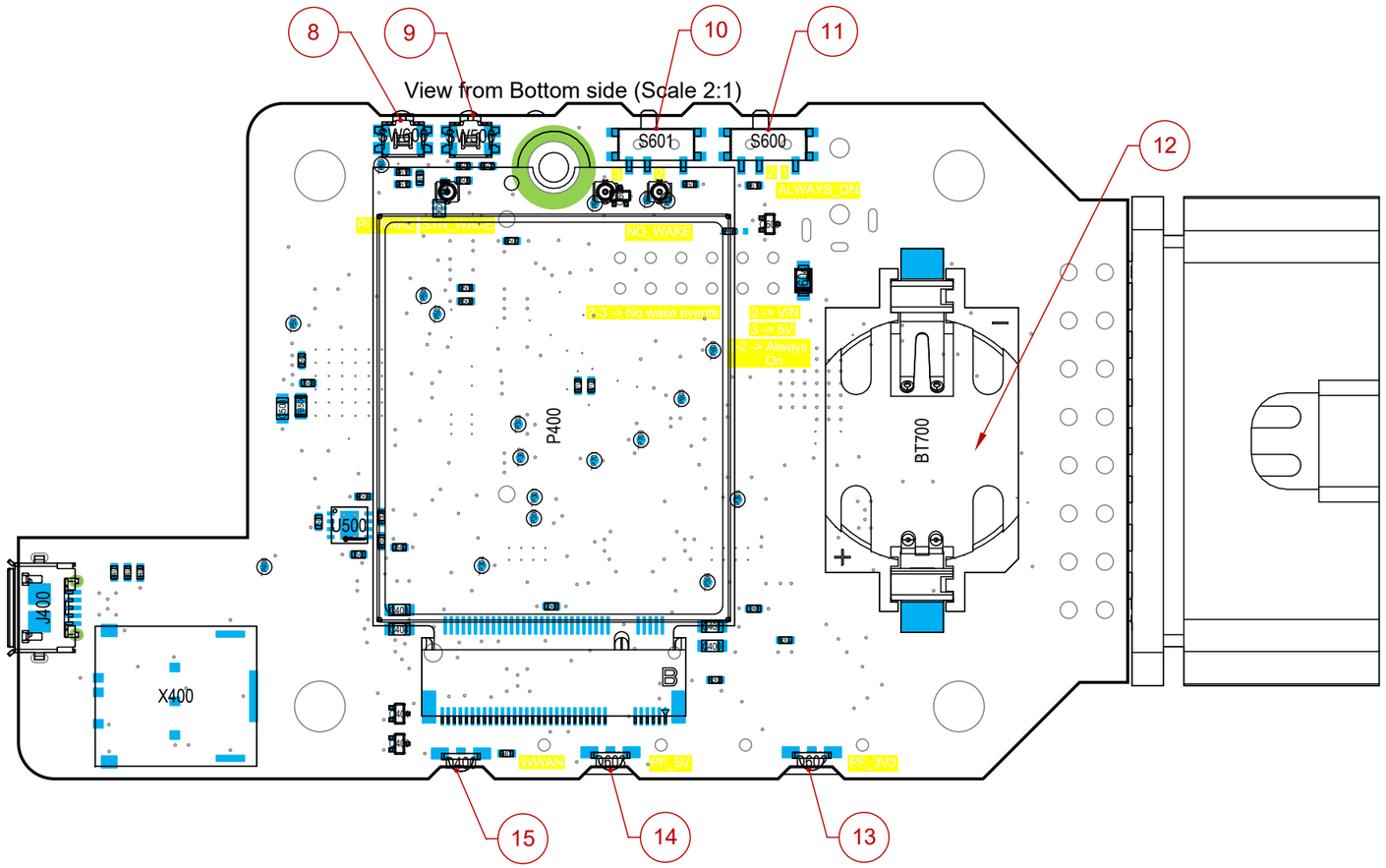
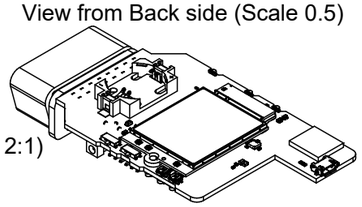
PCBA VIEW 2

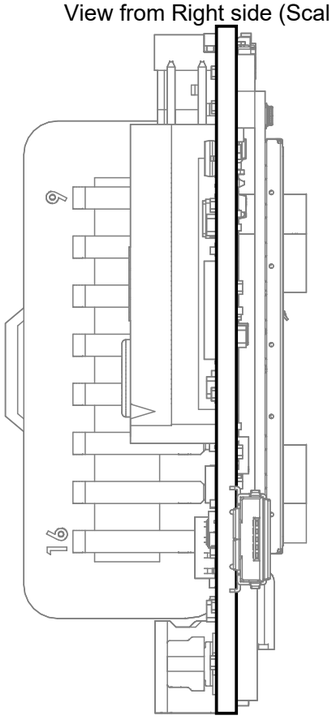
View from Bottom side (Scale 2:1)



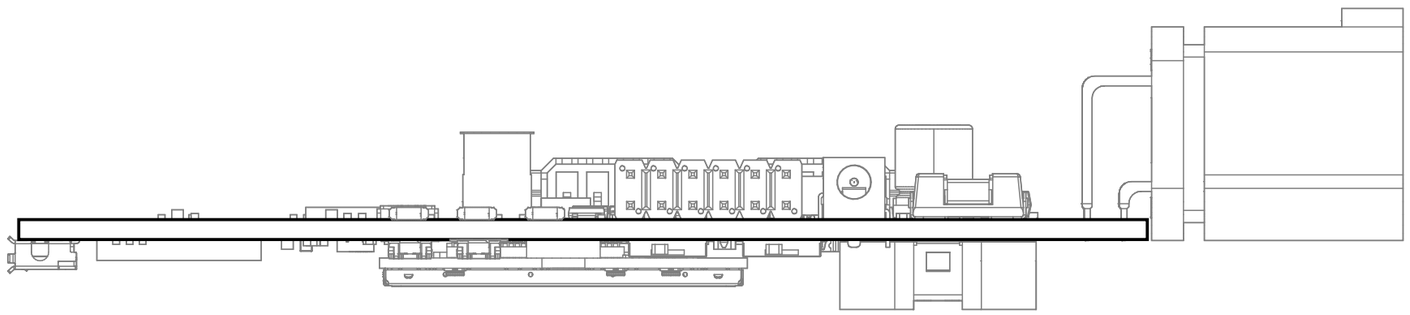
View from Back side (Scale 0.5)



View from Right side (Scale 2:1)



View from Back side (Scale 2:1)



Notes:

8. "PI Wake" - Push button
9. "STN Wake" - Push button
10. No Wake events
11. Always On (No power down)
12. Coin cell holder (CR2032)
13. Power Fail 3V3 LED
14. Power Fail 5V LED
15. WWAN

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DRILL INFORMATION

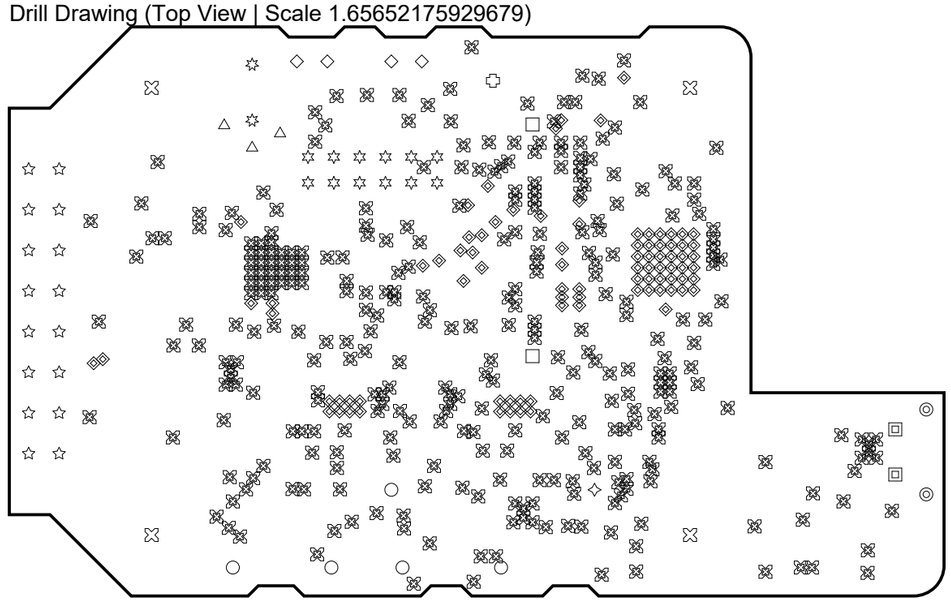
Board Outline

Technology	Selection
milling	x
v-scoring	
mixed (defined in Gerber file)	
mixed (defined in Draftsman drawing)	
Separation PCB Manufacturer	**Selection**
each PCB	
Assembly Panel	x
Separation Assembly House	**Selection**
each PCBA	x
Assembly Panel	

Via - Plugging / Filling / Tenting

IPC 4761 Type	Description	Selection
not used	All Vias without Plugging/Filling/Tenting	x
I(a)	Tented - Single Sided	
I(b)	Tented - Double Sided	
II(a)	Tented & Covered - Single Sided	
II(b)	Tented & Covered - Double Sided	
III(a)	Plugged - Single Sided	
III(b)	Plugged - Double Sided	
IV(a)	Plugged & Covered - Single Sided	
IV(b)	Plugged & Covered - Double Sided	
V	Filled (Fully Plugged)	
VI(a)	Filled & Covered (Fully Plugged) - Single Sided	
VI(b)	Filled & Covered (Fully Plugged) - Double Sided	
VII	Filled & Capped	
multiple used	Definded in Gerber file	

Drill Drawing (Top View | Scale 1.65652175929679)



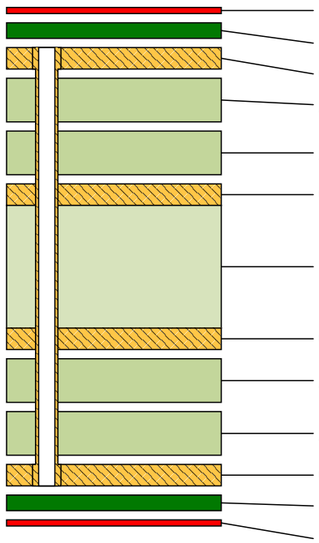
Drill Table

Symbol	Via / Pad	Count	Hole Size	Hole Type	Drill Layer Pair	Plated	Hole Tolerance
⊠	Via	323	0.300mm	Round	Top Layer - Bottom Layer	Plated	None
◈	Via	86	0.200mm	Round	Top Layer - Bottom Layer	Plated	None
⌬	Pad	1	4.400mm	Round	Top Layer - Bottom Layer	Plated	None
⊠	Pad	4	4.300mm	Round	Top Layer - Bottom Layer	Plated	None
✡	Pad	2	1.700mm	Round	Top Layer - Bottom Layer	Non-Plated	None
✧	Pad	1	1.600mm	Round	Top Layer - Bottom Layer	Plated	None
☆	Pad	16	1.500mm	Round	Top Layer - Bottom Layer	Plated	None
□	Pad	2	1.450mm	Round	Top Layer - Bottom Layer	Plated	None
○	Pad	5	1.100mm	Round	Top Layer - Bottom Layer	Plated	None
✡	Pad	12	1.020mm	Round	Top Layer - Bottom Layer	Plated	None
◇	Pad	4	0.900mm	Round	Top Layer - Bottom Layer	Non-Plated	None
◎	Pad	2	0.825mm	Slot	Top Layer - Bottom Layer	Plated	None
△	Pad	3	0.800mm	Slot	Top Layer - Bottom Layer	Plated	None
⧈	Pad	2	0.650mm	Slot	Top Layer - Bottom Layer	Plated	None
		463 Total					

16. Hole size is final dimension.

LAYERSTACK INFORMATION

Layer Stack Legend 1



Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.0254mm	SM-001	Solder Mask	GTS
CF-004	Top Layer	0.0350mm		Signal	GTL
Prepreg		*0.0711mm*	*PP-006*	*Dielectric*	
Prepreg		*0.0711mm*	*PP-006*	*Dielectric*	
CF-004	Int2 (Sign)	0.0350mm		Signal	G1
Core		*1.2000mm*	*Core-009*	*Dielectric*	
CF-004	Int3 (Sign)	0.0350mm		Signal	G2
Prepreg		*0.0711mm*	*PP-006*	*Dielectric*	
Prepreg		*0.0711mm*	*PP-006*	*Dielectric*	
CF-004	Bottom Layer	0.0350mm		Signal	GBL
Surface Material	Bottom Solder	0.0254mm	SM-001	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 1.6753mm

Surface Finish

Material	Selection
ENIG (chem. Ni/Au)	x
Chemical Tin	
ENEPIG	
HASL - Lead free	
HASL + Pb	
Other:	

Silkscreen

Side	Color / Material	Selection
Top	white	x
Bottom	white	x

Soldermask

Side	Color / Material	Selection
Top	green	x
Bottom	green	x

17. Layer stack thickness is final dimension

ADDITIONAL INFORMATION

ID	Process / Requirement	Selection / Definition
1	Halogen free (low Hal)	-
2	Warp & Weft direction	-
3	Temper PCB for better planarity	-
4	X-Ray	-
5	Serial Number	-
6	Electrical Tests	100% of PCBs
7	RoHS	yes
8	UL94	-
9	Datecode (PCB manufacturing)	yes (calender week / year)
10	Manufacturer Marking	-
11	Sideplating / Metallized Edges	-
12	Controlled Impedance	-
13	Soldering process	-
14	...	
15		
16		
17		
18		

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CHANGELOG

Name: KUKSA CANOPi
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Revision: A
Variant: [All Variants]
Initial Date: 1.12.2021
Plot Date: 18.01.2022 - 12:08

Version	**Revision**	Date (dd.MM.yyyy)	**Variant Name**	**Changes / Comment**	Responsible (Account Name)
1	0				
1	1	12.01.2022		Revised shutdown circuit, reduce to four layers, rounded corners	Ko

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