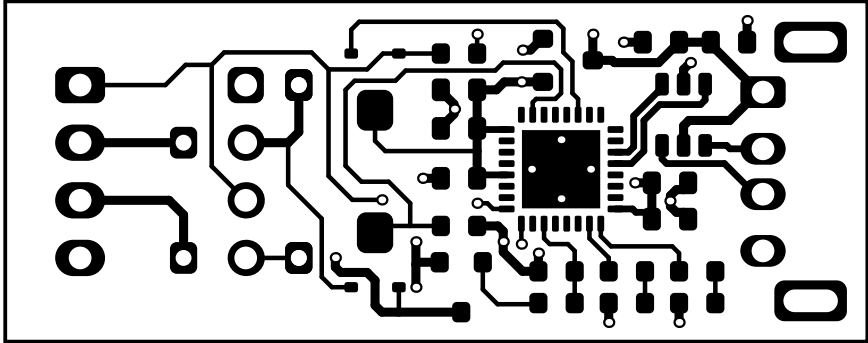
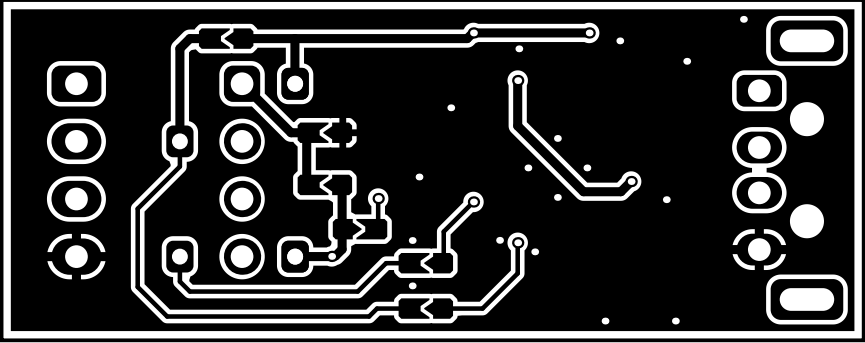


USB-SW-A - Top Layer (Scale 3:1)



USB-SW-A - Top Layer (Scale 3:1)



Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
	Surface Material	0.0100mm	SM-001	Solder Mask	GTS
PbSn	Top Copper Plating	0.0200mm		Surface Finish	
CF-004	Top Layer	0.0350mm		Signal	GTL
Core		1.5000mm	FR-4 TG140	Dielectric	
CF-004	Bottom Layer	0.0350mm		Signal	GBL
PbSn	Bottom Copper Plating	0.0200mm		Surface Finish	
	Bottom Solder	0.0100mm	SM-001	Solder Mask	GBS
	Bottom Overlay			Legend	GBO
Total thickness: 1.6300mm					

Board Specification

Minimum Track	0.2 mm	Solder Mask Color	Black
Minimum Gap	0.2 mm	Silkscreen	White
VIA Process	Tented	Board Finish	HASL - LEAD

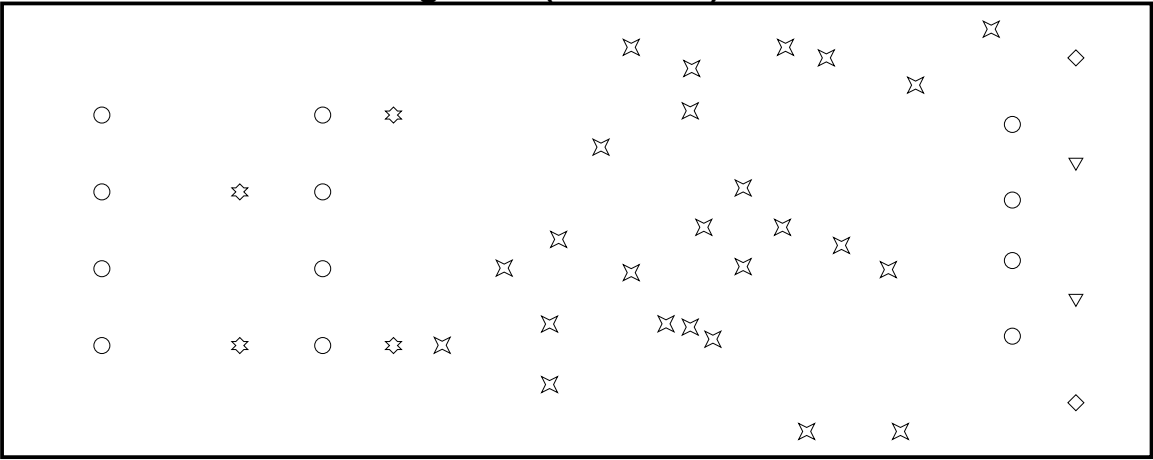
A

B

C

D

USB-SW-A - Drill Drawing View (Scale 4:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Type	Via / Pad	Hole Tolerance
☆	25	0.30mm	Plated	Round	Via	
☆	4	0.70mm	Plated	Round	Pad	
○	12	1.00mm	Plated	Round	Pad	
▽	2	1.10mm	Non-Plated	Round	Pad	
◇	2	2.40mm	Plated	Slot	Pad	
	45 Total					

Project: *USB Controlled Relay*

Revision: *A*

Title: **Board Specifications**

Sheet 2 of 2

Date: Mar-01-2025

Author: Alfredo Cortellini



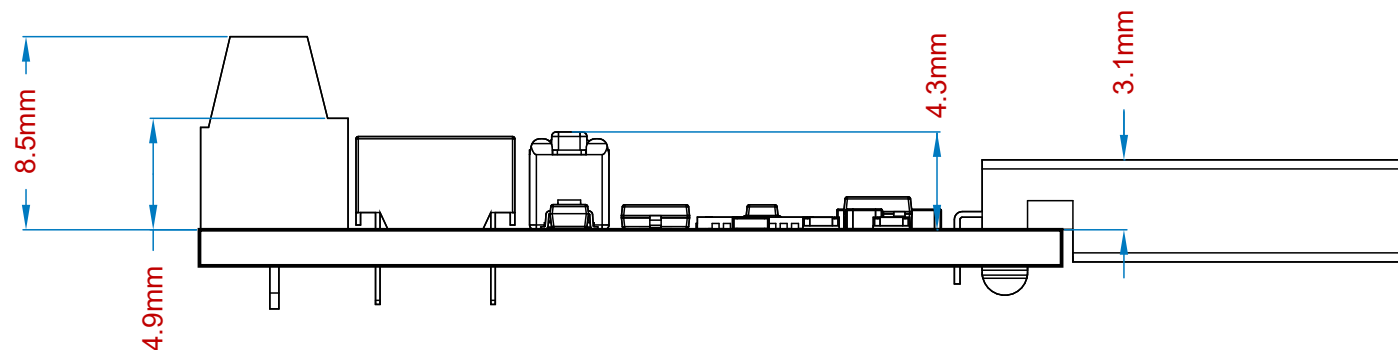
A

B

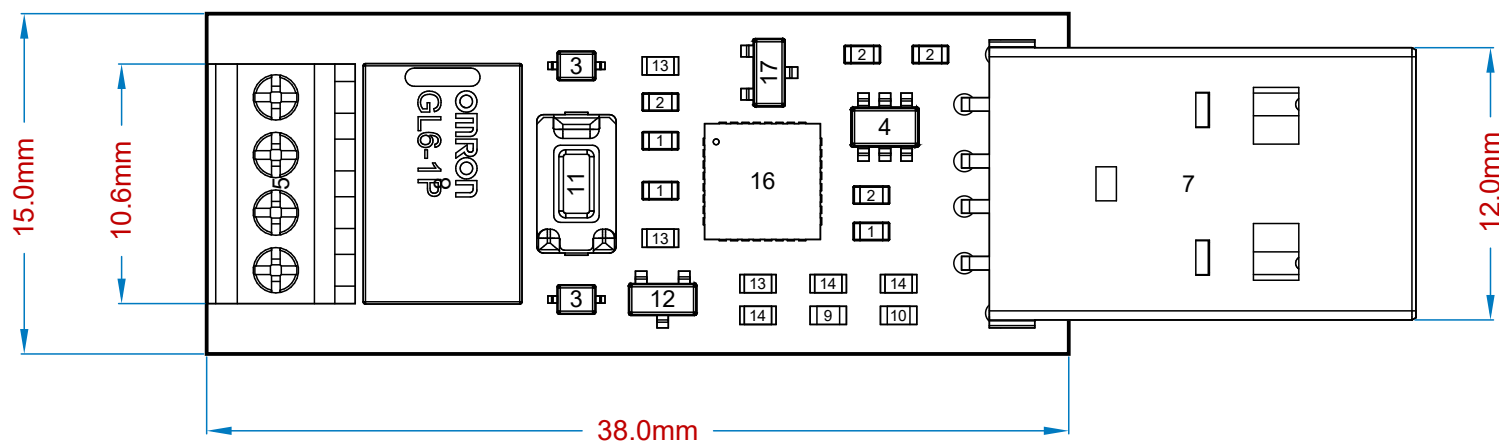
C

D

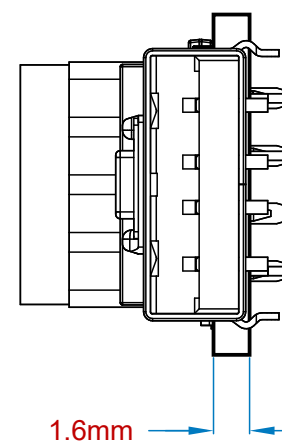
Front side (Scale 3:1)



USB-SW-A - View from Top side (Scale 3:1)



Right side (Scale 3:1)



Project: **USB Controlled Relay**

Revision: **A**

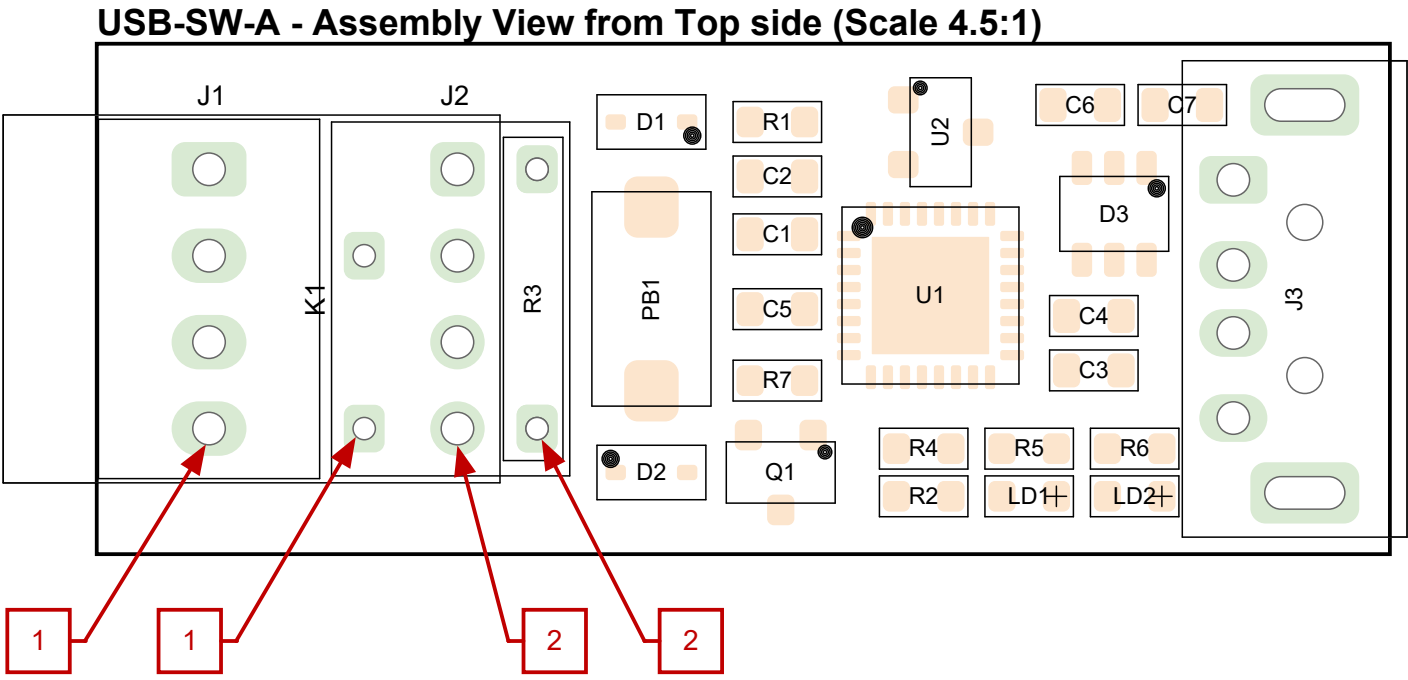
Title: **Board Dimensions**

Sheet 1 of 1

Date: Mar-01-2025

Author: Alfredo Cortellini





Bill Of Materials

Line #	Designator	Quantity	Manufacturer Part Number
1	C1, C3, C5	3	CGA3E2X7R1H104K080AA
2	C2, C4, C6, C7	4	GRM188Z71C475KE21D
3	D1, D2	2	BAT54WS-7-F
4	D3	1	USBLC6-4SC6
5	J1	1	691210910004
6	J2	1	CO975
7	J3	1	USB-AP-S-RA
8	K1	1	G6L-1P-DC5
9	LD1	1	LTST-C191KRKT
10	LD2	1	LTST-C191KGKT
11	PB1	1	SKQMAQE010
12	Q1	1	BSS138-7-F
13	R1, R4, R7	3	RC0603FR-0710KL
14	R2, R5, R6	3	RC0603FR-07470RL
15	R3	1	RNF18FTD10K0
16	U1	1	STM32F042K6U6TR
17	U2	1	AP7313-33SRG-7

Assembly Notes

- 1
- Install K1 and J1 if you want to use the relay ON-Off feature.
Do NOT install J2 and R3
- 2
- Install J2 if you want to use the fan control or servo feautre.
Follow the instructions on the back if you have a regular or a PWM fan. Install R3 if you have PWM FAN.
Do NOT install K1 and J1

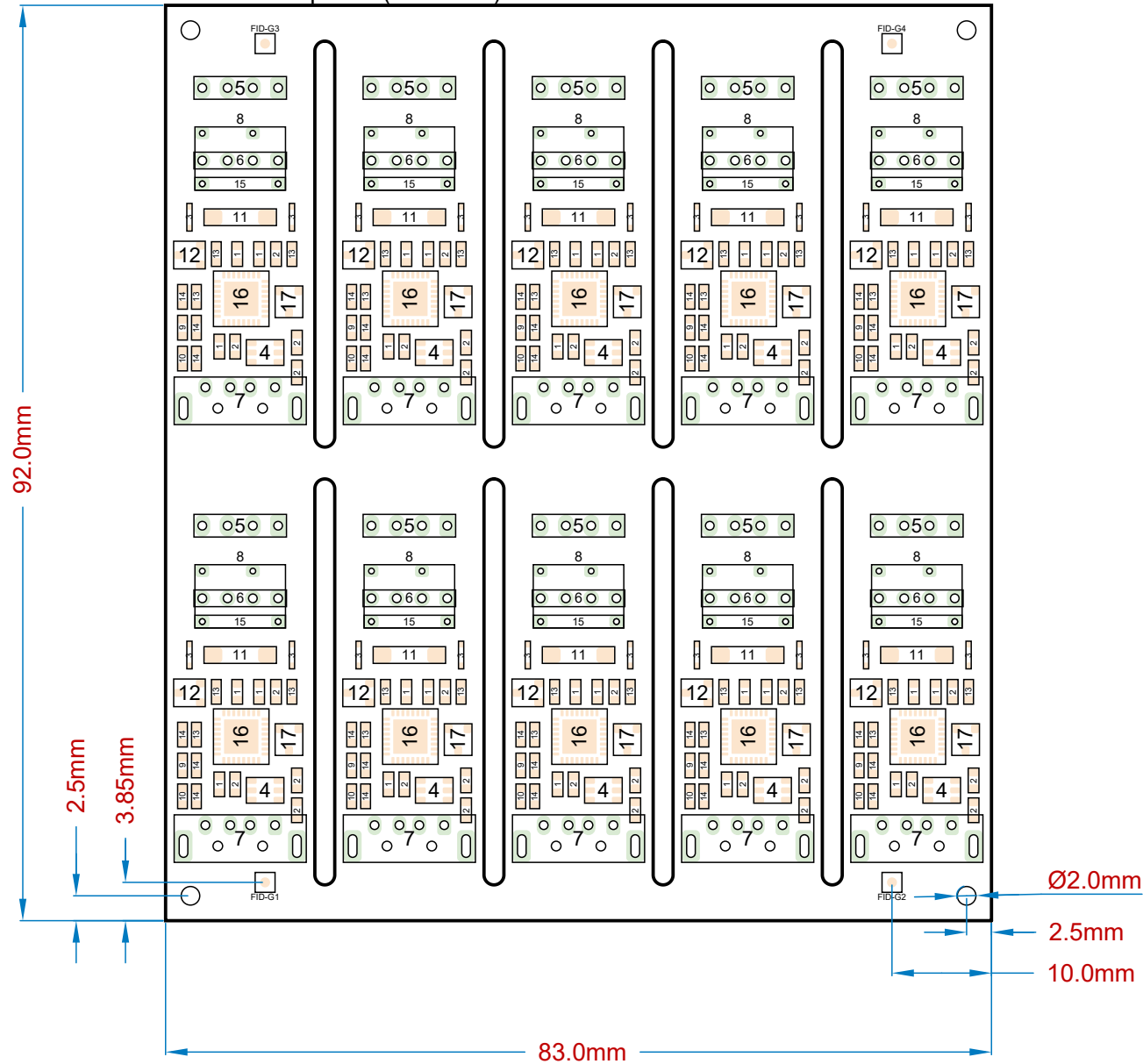
A

B

C

D

View from Top side (Scale 3:2)

Project: **USB Controlled Relay**Revision: **A**Title: **Panel Dimensions**

Sheet 1 of 1

Date: Mar-01-2025

Author: Alfredo Cortellini



A

B

C

D