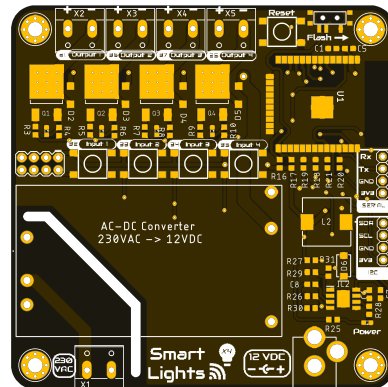


1 Overview

- ✓ ESP32-S based
- ✓ Power supply though $230V_{AC}$ or direct $\leq 24V_{DC}$
- ✓ 4 independent dimmable outputs
- ✓ 4 pushbutton inputs
- ✓ I2C bus for expansions



2 Description

The Smart Lights X4 is an electronic board based on the ESP32 with the target of controlling up to 4 dimmable led strips under $24V_{DC}$. It can read up to 4 switches so you can also program the response of the light depending on physical inputs

3 Technical specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Supply voltage (AC)	V_{AC}	100		240	V	Block terminal input
Supply voltage (DC)	V_{DC}	0	12	24	V	DC Jack input
Power	I			40	W	
Working temperature ¹	T_{amb}	0	25	60	$^{\circ}C$	
Storage temperature ¹	T_{amb}	-20		100	$^{\circ}C$	

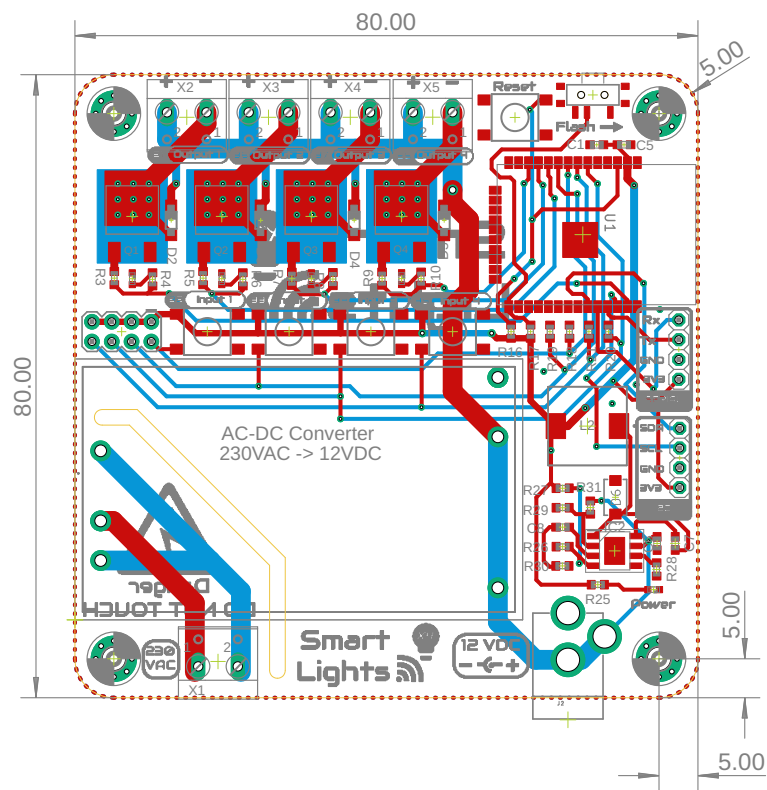
¹ Based on components datasheets.

Table 1: Absolute ratings

4 Bill of Materials

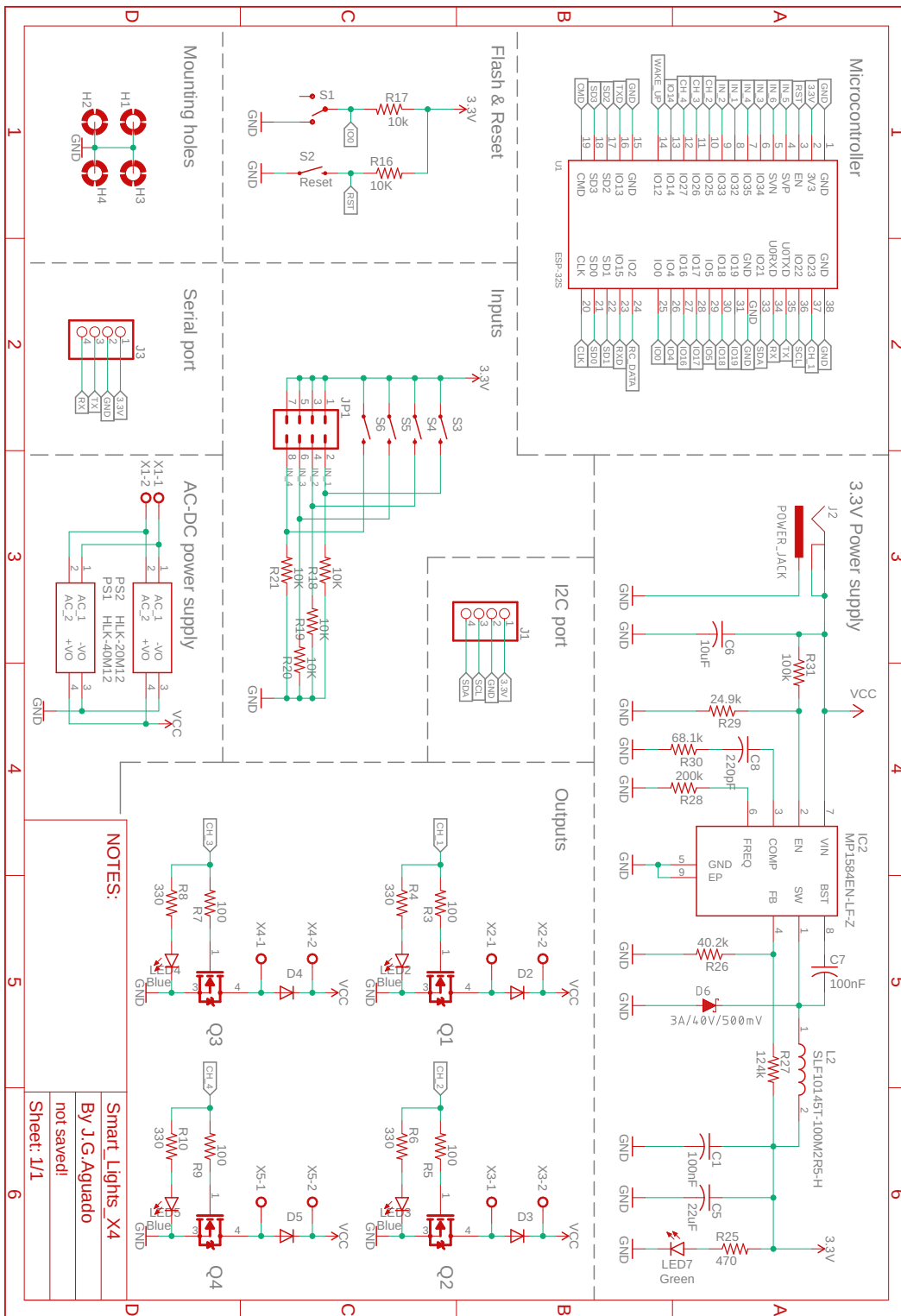
Value	ID	Package
	D2	SOD123
	D3	SOD123
	D4	SOD123
	D5	SOD123
	J1	1X04
	J3	1X04
	JP1	2X4
	X1	W237-132
	X2	W237-132
	X3	W237-132
	X4	W237-132
	X5	W237-132
3A/40V/500mV	D6	SMA-DIODE
10K	R16 R18 R19 R20 R21	R0603
10k	R17	R0603
10uF	C6	C0603
22uF	C5	C0603
24.9k	R29	R0603
40.2k	R26	R0603
68.1k	R30	R0603
100	R3 R5 R7 R9	R0603
100k	R31	R0603
100nF	C1 C7	C0603
124k	R27	R0603
200k	R28	R0603
220pF	C8	C0603
330	R4 R6 R8 R10	R0603
470	R25	R0603
Blue	LED2 LED3 LED4 LED5	SML0603
ESP-32S	U1	ESP-32S
Green	LED7	SML0603
HLK-20M12	PS2	HLK-20M12
HLK-40M12	PS1	HLK-40M12
IRLR2905TRPBF	Q1 Q2 Q3 Q4	INFINEON TECHNOLOGIES IRLR2905TRPBF 0
MOUNT-PAD-ROUND	H1 H2 H3 H4	3 0-PAD
MP1584EN-LF-Z	IC2	SOIC127P600X170-9N
POWER JACK	J2	POWER JACK PTH
Reset	S2 S3 S4 S5 S6	TACTILE SWITCH TALL
SLF10145T-100M2R5-H	L2	SLF10145
SWITCH SPDT	S1	KPS-1290

5 Measures



Note: Indicated measures in *mm*.

6 Schematics



More information ...

You can find this document and many more under the documentation section available in the Github repository https://github.com/JGAguado/Smart_Lights/tree/X4.