

SLD_C_W_S3

Highlights



- ✓ RGB565-Interface with touch
- ✓ Controlling Schukat Smartwin display series
- ✓ Industrial standard
- ✓ IO-Port (Piggy-back ready)
- ✓ WLAN / Bluetooth
- ✓ Shortened time-to-market due to optimal interaction of display, controller board and extensive software library
- ✓ Ready for Slint & LVGL

Features

The SLD_C_W_S3 is a display controller board from the ESoPe platform series, based on an Espressif ESP32S3 CPU. It is used to control RGB LC displays from the Schukat Smartwin display concept. SLD_C_W_S3 can be used as an evaluation board to use ready-made interfaces and software libraries in the development of ESP projects. On the other hand, they are suitable for industrial use and can therefore also be used directly as an interface for series products.

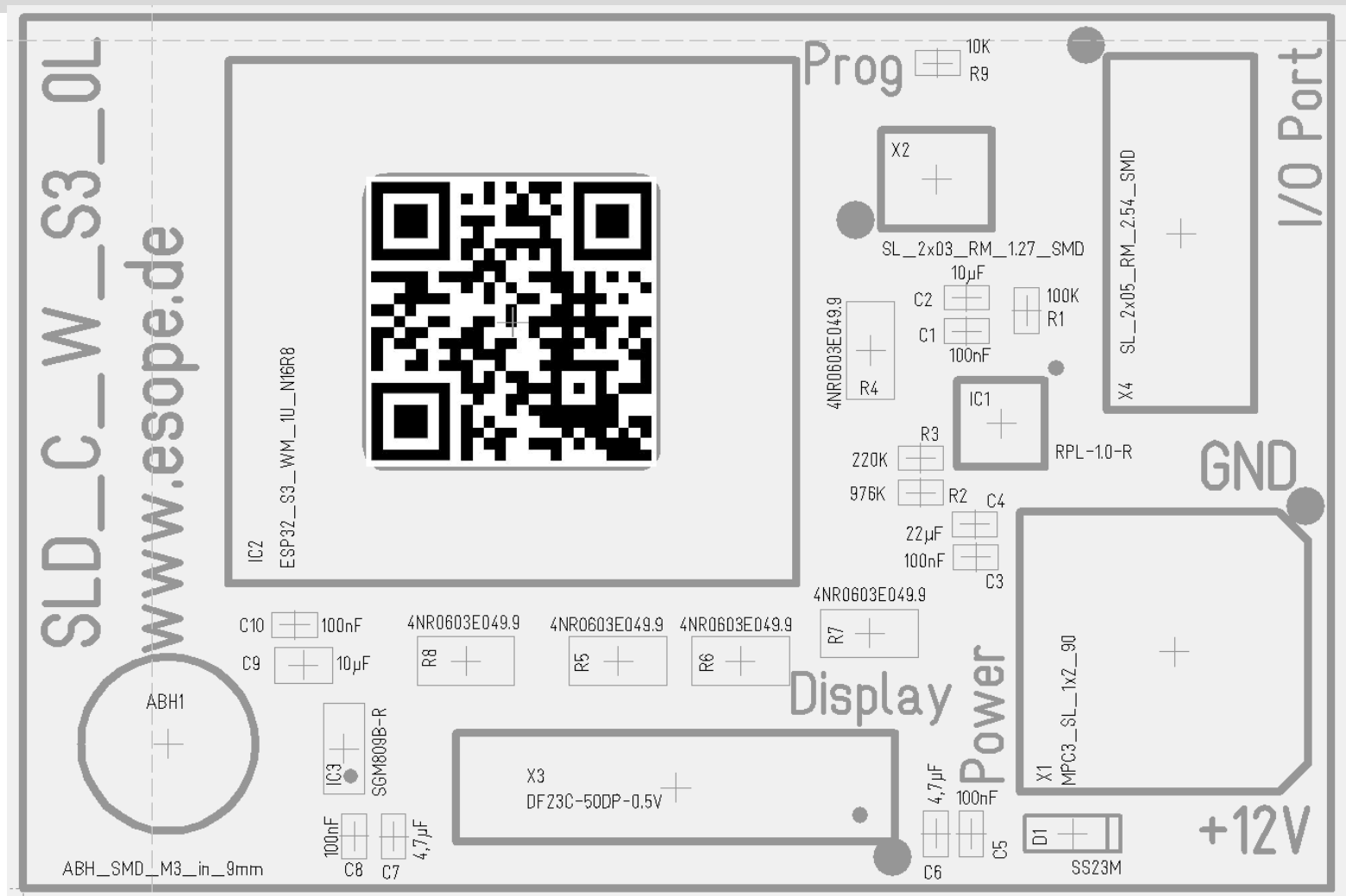
Technical Data

Parameter	Value
Power Supply	DC 4V up to 22V
Power Consumption	approx. 360mW
Operating Ambient Temperature	-30°C...+80°C
Dimensions	45x30mm
Weight	approx. 8g
Conformity	RoHS

Schematic

Details in document SLD_C_W_S3_1A_SCH.pdf

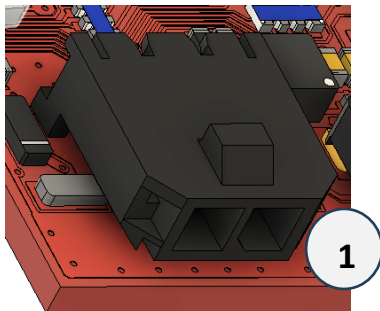
Board



Connection Plan

Power Supply

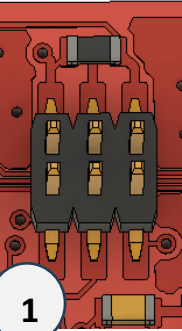
X1: MPC3 1x2-connector (matching connector: Würth, manufacturer-no. 662002013322)



Pin	Function
1	GND
2	+12V

ESP32 Programming – Interface für ESP-PROG

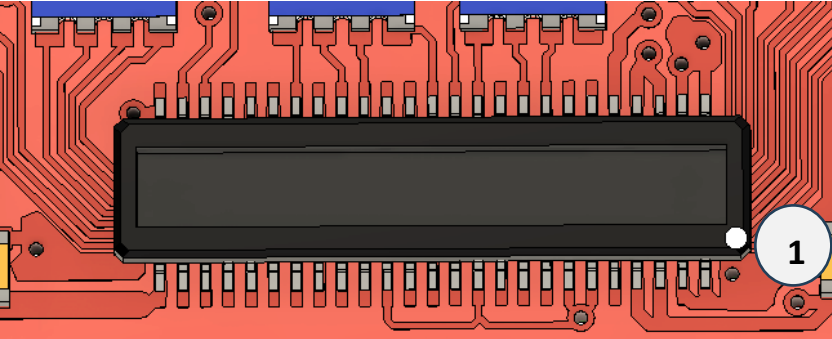
X2: pin header, 6-pole, grid 1.27



Pin	Function
1	/RESET
2	+3V3
3	TXD
4	GND
5	RXD
6	MD4

Interface Display

X3: DF23C-50DP-0.5V, 50-pole

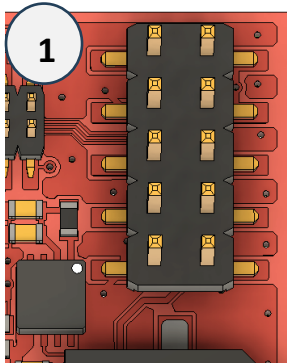


Pin	Function
1	GND
2	GND
3	GND
4	GND
5	+3V3
6	+3V3
7	+3V3
8	+3V3
9	BACKLIGHT
10	+3V3
11	GND
12	GND

13	GND
14	GND
15	Red 3
16	Red 4
17	Red 5
18	Red 6
19	Red 7
20	GND
21	GND
22	Green 2
23	Green 3
24	Green 4
25	Green 5
26	Green 6
27	Green 7
28	GND
29	GND
30	GND
31	Blue 3
32	Blue 4
33	Blue 5
34	Blue 6
35	Blue 7
36	GND
37	VSYNC
38	HSYNC
39	DE
40	GND
41	PCLK
42	GND
43	Display
44	/RESET
45	Touch /Reset
46	Touch INT
47	Touch SDA
48	Touch SCL
49	+3V3
50	GND

I/O – Port / Kommunikation with ESoPe Piggy-Back Boards

X5: 10pol. connector, grid 2.54



Pin	Function
1	+12V
2	+3V3
3	GND
4	+3V3
5	NC
6	GPIO
7	SIO_RXD
8	SIO_TXD
9	GND
10	GND

Software Development Manual

For the simple development of software for graphical user interfaces in systems, there is a demo project on GitHub that has been published under the Apache2 license. This shows how the esopublic library, which is also available on GitHub, can be used to create graphical interfaces with the display.

Demoproject: https://github.com/ESoPe-GmbH/sld_demo
 Esopublic: <https://github.com/ESoPe-GmbH/esopublic>

The demo project offers easy integration into the graphical frameworks Slint (<https://slint.dev/>) and LVGL (<https://lvgl.io/>). More detailed information on the use of the respective framework can be found in the readme of the GitHub project.

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Change History

File: SLD_C_W_S3_1A_DS_en

Revision	Date	State	Author
1.0	2024-12-02	Erstellung	K. Peters

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