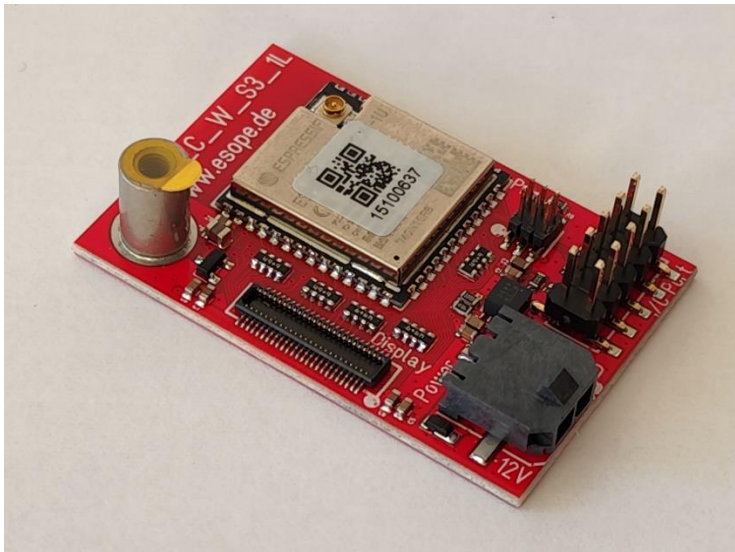


SLD_C_W_S3

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.

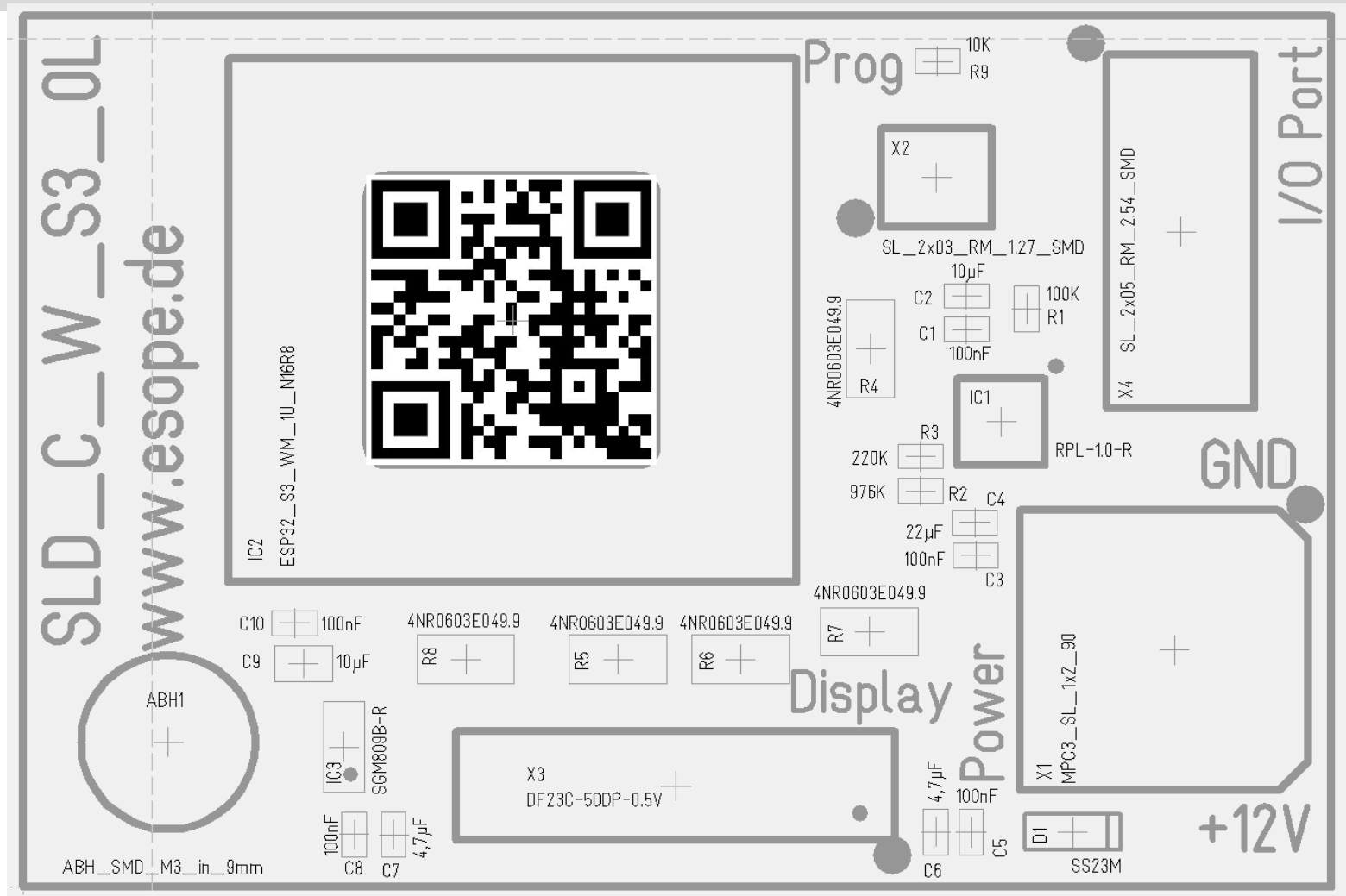
Technical Data

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

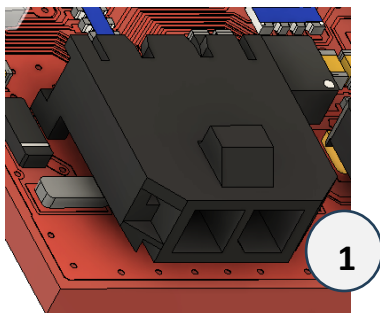
Board



Connection Plan

Power Supply

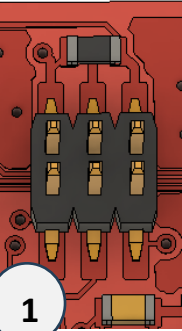
X1: MPC3 1x2-connector (matching connector: Würth, manufacturer-no. 662002013322)



Pin	Function
1	GND
2	+12V

ESP32 Programming – Interface für ESP-PROG

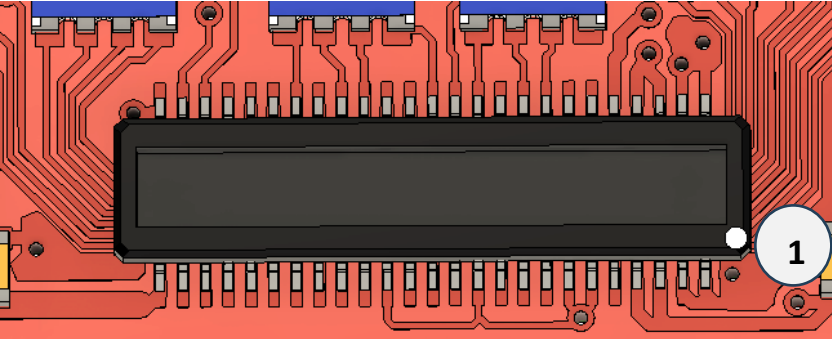
X2: pin header, 6-pole, grid 1.27



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

Interface Display

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

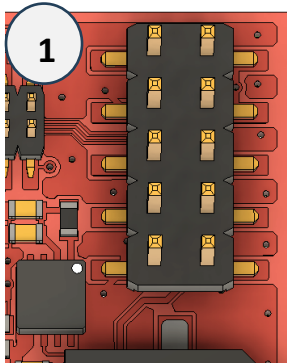


Pin	Function
1	GND
2	GND
3	GND
4	GND
5	+3V3
6	+3V3
7	+3V3
8	+3V3
9	BACKLIGHT
10	+3V3
11	GND
12	GND

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.

Copyrights and Trademarks

All trade names, trademarks and registered trademarks mentioned herein are the property of their respective owners and are hereby acknowledged.

Change History

File: SLD_C_W_S3_1A_DS_en

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

Terms & Conditions of Usage

The product data contained in this product data sheet is exclusively intended for technically trained staff. Changes of this product data sheet are reserved. Threshold of originality on this document, as well on all included sketches, illustrations and fotos remain at ESoPe GmbH. We point out explicitly to § 97ff UrhG and § 110ff UrhG. Changes and mistakes reserved. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Should you require product information in excess of the data given in this product data sheet or which concerns the specific application of our product, please contact our sales office. ESoPe GmbH (ESoPe) reserves the right to make changes to its products or to discontinue any product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current. ESoPe warrants performance of its products and related software to the specifications applicable at the time of sale in accordance with ESoPe’s standard warranty. Testing and other quality control techniques are utilized to the extent ESoPe deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements. Certain applications using semiconductor products may involve potential risks of death, personal injury, or severe property or environmental damage (“Critical Applications”). ESoPe products are not designed, intended, authorized or warranted to be suitable for use in life-support applications, devices or systems or other critical applications. Inclusion of ESoPe products in such applications is understood to be fully at the risk of the customer. Use of ESoPe products in such applications requires the written approval of authorised representative. Questions concerning potential risk applications should be directed to ESoPe. In order to minimize risks associated with the customer’s applications, adequate design and operating safeguards should be provided by the customer to minimize inherent or procedural hazards. ESoPe assumes no liability for applications assistance, customer product design, software performance, or infringement of patents or services described herein. Nor does ESoPe warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of ESoPe covering or relating to any combination, machine, or process in which such products or services might be or are used.