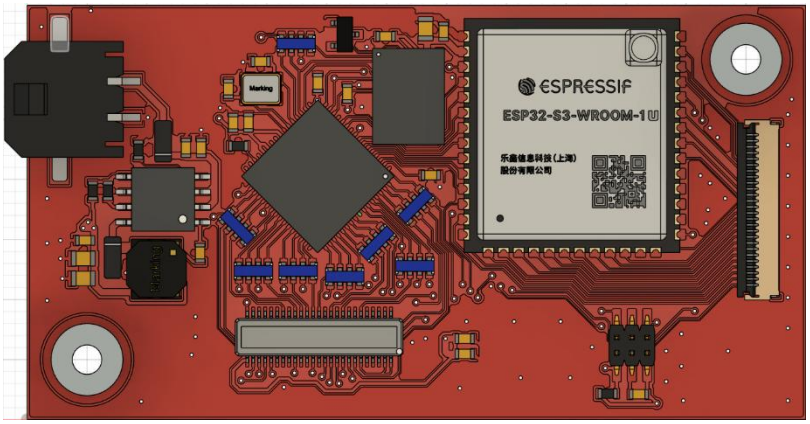
SLD_C_W_S3_BT817



Highlights

- ✓ **24-Bit-RGB-Interface with Touch**
- ✓ **Controller Borad for 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**
- ✓ **Support for mJPG videos via BT817 chip**

Features

SLD_C_W_S3_BT817 is a display-controllerboard from the ESoPe-platform-series, based on an Espressif ESP32S3-CPU and grafik chip BT817. It is used to control RGB LC displays from the Schukat Smartwin display concept, preferably for the 5" and 7" displays.
SLD_C_W_S3_BT817 can be used as an evaluation board to use prefabricated 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.

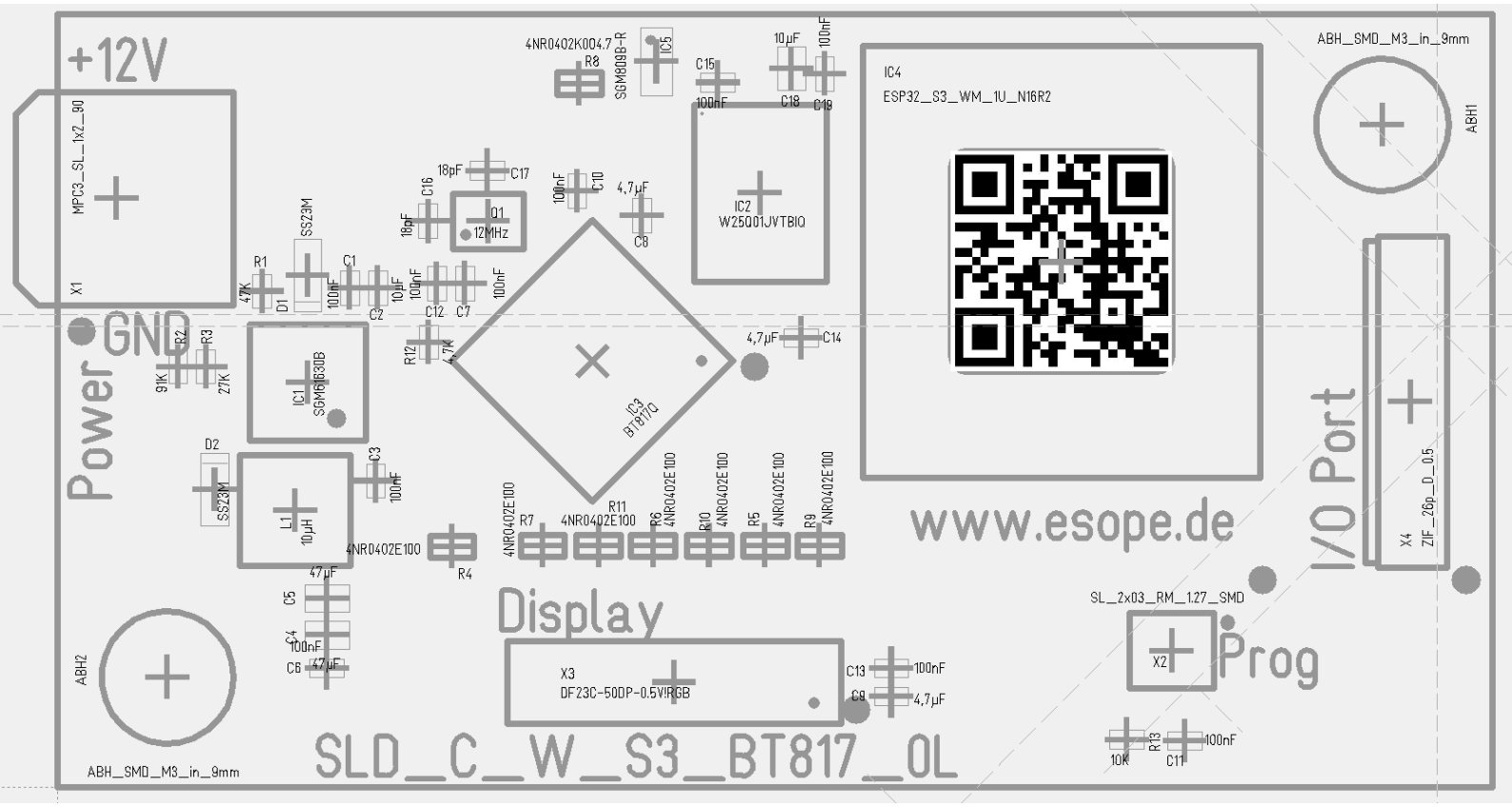
Technical Data

Parameter	Value
Power Supply	DC 5V to 22V
Power Consumption	approx. 360mW
Operating Ambient Temperature	-30°C...+80°C
Dimensions	65 x 34,5 mm
Weight	approx. 9g
Conformity	RoHS

Schematic

Details in document SLD_C_W_S3_1A_BT817_SCH.pdf

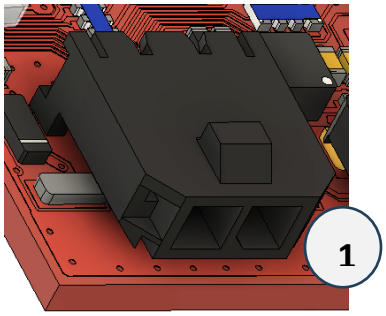
Board



Connection Plan

Power Supply

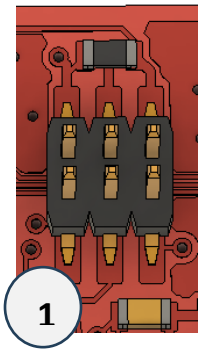
X1: MPC3 1x2-connector (matching connector: Würth, manufacturer-no. 662002013322)



Pin	Function
1	GND
2	+12V

ESP32 Programming – Interface for ESP-PROG

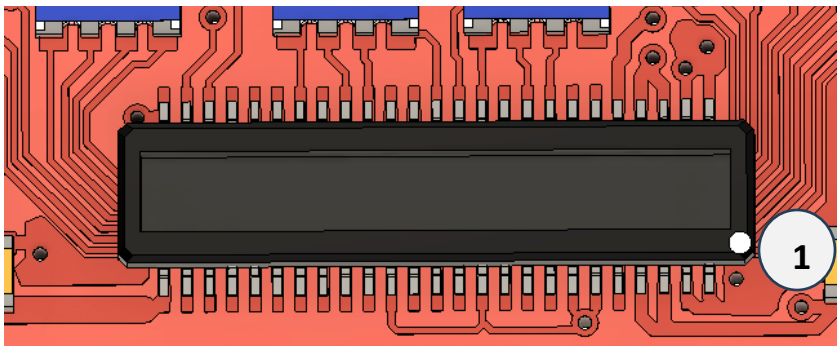
X2: pin header, 6-pole, grid 1.27



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

Interface Display

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

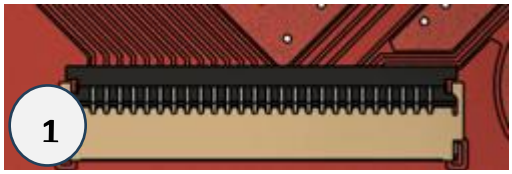


Pin	Function
1	GND
2	GND
3	GND
4	GND
5	+3V3
6	+3V3
7	+3V3
8	+3V3
9	BACKLIGHT
10	+3V3
11	GND
12	Red 0

13	Red 1
14	Red 2
15	Red 3
16	Red 4
17	Red 5
18	Red 6
19	Red 7
20	Green 0
21	Green 1
22	Green 2
23	Green 3
24	Green 4
25	Green 5
26	Green 6
27	Green 7
28	Blue 0
29	Blue 1
30	Blue 2
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 / Communication with ESoPe Piggy-Back Boards

X4: ZIF-connector 26-pole, grid 0.5



Pin	Function
1	Audio_L
2	PMOD SPI2 /CS
3	PMOD SPI2 /CS2
4	PMOD SPI2 /INT
5	PMOD SPI2 /RESET
6	PMOD SPI MISO
7	PMOD SPI MOSI
8	PMOD SPI Clock
9	PMOD SPI /CS
10	PMOD SPI /CS2
11	/SD SGM2820 (Audio)
12	PMOD SPI /INT
13	PMOD SPI /RESET
14	GND
15	I^2C SDA
16	I^2C SCL
17	I^2C /RESET
18	I^2C INT
19	GND
20	RS485 /RE_DE
21	RS485 RXD
22	RS485 TXD
23	+3V3 DC
24	+3V3 DC
25	+12V DC
26	+12V DC

Software Development Manual

For the simple development of software for graphical user interfaces in systems, there is a demo project on GitHub, which 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.

Demo project: 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

Change-History

File: SLD_C_W_S3_BT817_1A_DS_en

Revision	Date	State	Author
1.0	18.02.2025	Initial release	Katja Peters
1.1	24.02.2025	Final release	Katja Peters

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