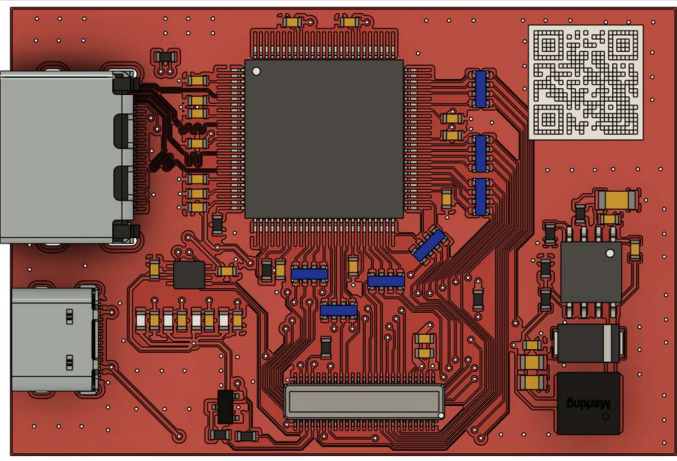




## HDMI2RGB

## Highlights



- ✓ 24-Bit-RGB-Interface with Touch
- ✓ Controller Board for Smartwin Display-Series
- ✓ Industrial Standard
- ✓ HDMI-Connection for Raspberry Pi
- ✓ Touch over HDMI for Raspberry Pi

## Features

The HDMI2RGB is a display controller board from the ESoPe platform series, based on the TFP401A. It is used to control RGB LCD displays from the Schukat SMARTWIN display concept. The HDMI2RGB board is optimized for the Raspberry Pi 4 / 5. The Raspberry Pi can be configured to read touch input via the HDMI connection.

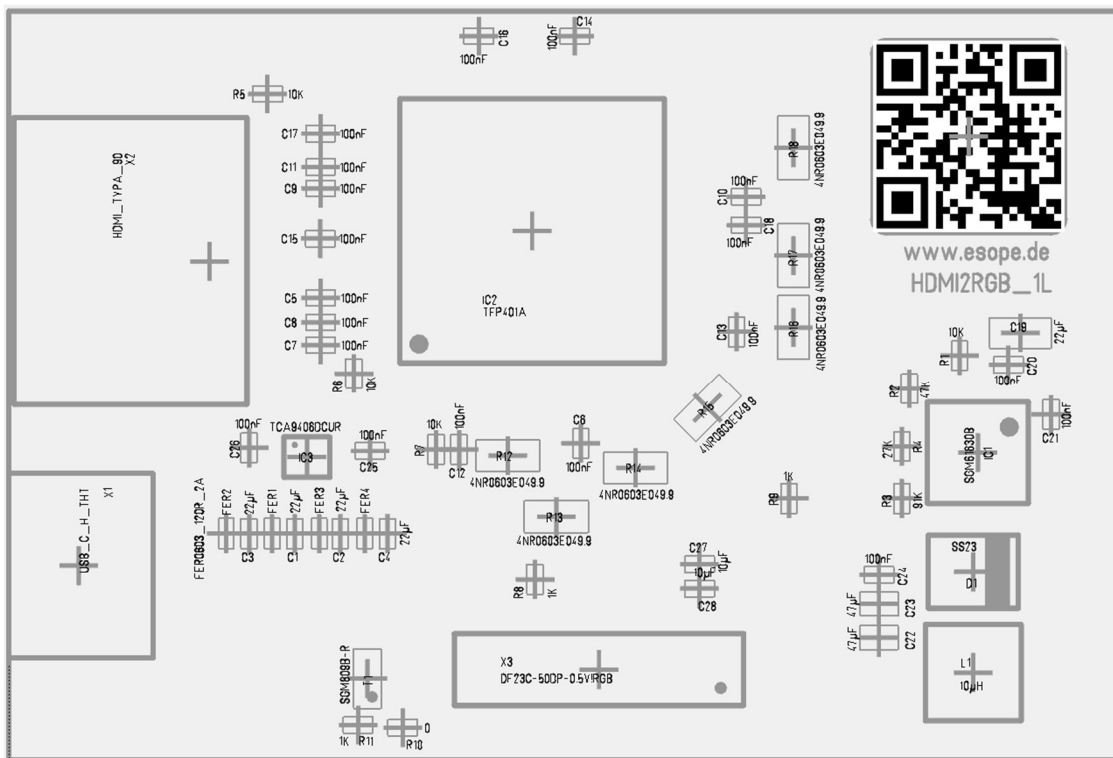
## Technical Data

Parameter	Wert
Power Supply	5V (USB-C)
Power Consumption	approx. 20mA
Operating Ambient Temperature	-30°C...+80°C
Dimensions	38,75mm x 58mm (h x w)
Weight	approx. 13g
Conformity	RoHS

## Schematic

Details in document HDMI2RGB\_1A.pdf

## Board

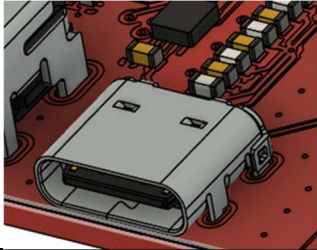




## Connection Plan

### Power Supply

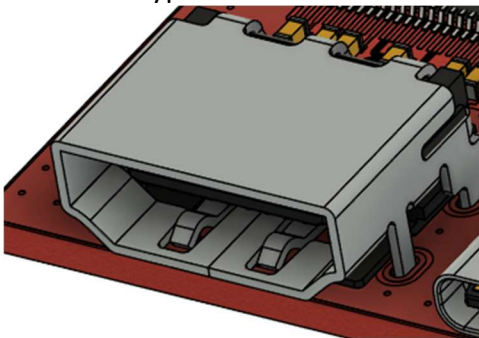
X1: USB-C



Pin	Function
1	GND
2	+5V
3	NC
4	NC
5	+5V
6	GND

### HDMI-Connection

X2: HDMI Type A



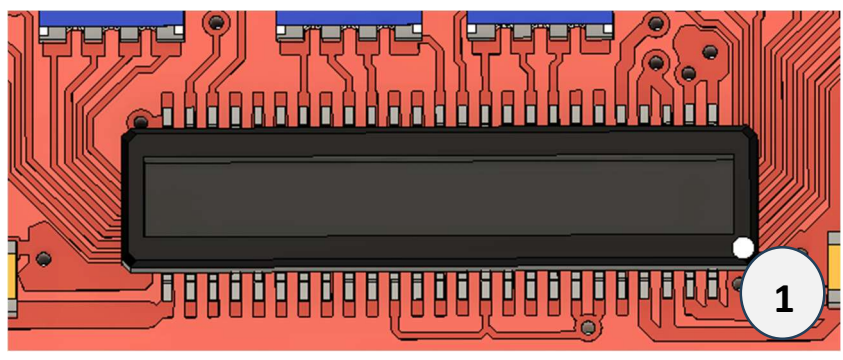
Pin	Function
1	TMDS2+
2	TMDS2 Shield
3	TMDS2-
4	TMDS1 +
5	TMDS1 Shield
6	TMDS1 -
7	TMDS0 +
8	TMDS0 Shield
9	TMDS0 -
10	TMDS Clock +
11	TMDS Clock Shield
12	TMDS Clock -



13	NC
14	NC
15	SCL
16	SDA
17	GND
18	VCC
19	Hot Plug/ HEC+
20	NC
21	NC
22	NC
23	NC

## Interface Display

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



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

## Copyrights and Trademarks

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## Change-History

Datei: HDMI2RGB\_1A\_DS\_en.docx

Revision	Datum	Status	Autor
0.1	19.03.2025	Created	D. Schluck
1.0	19.05.2025	Translated from finished German Version	Firat Can Sülünkü



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