Battery Monitoring

V_BAT
R4 100k
IO1/BAT-CHECK
R5 100k
C9 100nF
GND
GND

B1 Schraube
B2 Schraube
GND

DC-DC Converter

5V
U1
VIN   SW
EN   FB
PG   GND
L1 2,2uH
3,3V
C3 10uF
C1 10uF
R1 900k
GND
GND
GND
R2 200k
GND
U_TLV62569P

USB-C Connector

NOTE: VBUS = +5V

VBUS   VBUS   5V
D2
STPS340

J4
VBUS   A4_B9
VBUS   B4_A9
DN1   A7
DN2   B7
DP1   A6
DP2   B6
SBU1   A8
SBU2   B8
CC1   A5
CC2   B5
GND   A1_B12
GND   B1_A12
SHELL_GND   SH1
SHELL_GND   SH2
SHELL_GND   SH3
SHELL_GND   SH4
J_USB-C

D-
D+
R7 5k1
R6 5k1
GND   GND
GND

Microcontroller

3,3V
R3 >10k
EN
C2 100nF
GND
3,3V
C10 1uF
GND

U2
2   EN   3V3   1
18   TEMP_SENS/IO0 / IO0   IO7   6
17   IO1/BAT-CHECK / IO1   IO8   7
16   IO2/ARGB / IO2   IO9   8
15   IO3/MOD_CHECK / IO3   IO10   10
4   IO4/SDA / IO4   D-/IO18   13
5   IO5/SCL / IO5   D+/IO19   14
3   IO6
12   IO21/TX / TXD/IO21
11   IO20/RX / RXD/IO20   GND   9
ESP32-C3-WROOM-02-N4
GND

IO7
IO8
IO9
IO10
D-
D+

Input

3,3V
R8 100k
J2
IO10   1
        2
BUTTON
GND

Serial-Connection

J3
GND   1
3,3V   2
IO21/TX 3
IO20/RX 4
EN   5
TEMP_SENS/IO0   6
SERIAL

Module-Port

J1
V_BAT   1
VBUS   2
3,3V   3
GND   4
5V   5
5V   6
GND   7
3,3V   8
IO3/MOD_CHECK   9
IO4/SDA 10
IO5/SCL 11
IO6   12
IO7   13
IO8   14
IO9   15
MODULE_COM

Module-Detection

IO3/MOD_CHECK
C11 100nF
R9 100k
GND

ARGB-Leds

5V
IO2/ARGB
C5 100nF
D3 WS2812b
C6 100nF
D4 WS2812b
C7 100nF
D5 WS2812b
C8 100nF
D6 WS2812b
GND
GND
ARGB_OUTPUT
5V   J6
      3
      2
      1
GND

Temperatur Sensor

3,3V
R10 4k7
U3
3   VDD
2   DQ
1   GND
3,3V
C4 100nF
TEMP_SENS/IO0
GND   U_DS18B20   GND

Name	Description	Designator	LibRef	Footprint	Quantity
Schraube	Schraubenloch für M3 Schrauben	B1, B2	B_Schraube	B_Schraube-M3 PAD	2
10uF	Kondensator SMD Universal, Keramik, Folie, usw.	C1, C3	C_SMD_KO	C_SMD_0805	2
100nF	Kondensator SMD Universal, Keramik, Folie, usw.	C2, C4, C5, C6, C7, C8, C9, C11	C_SMD_KO	C_SMD_0603	8
1uF	Tantalkondensator	C10	C_SMD_Tantal	C_SMD_0805	1
STPS340	Diode SMD Schottky	D2	D_SMD_Schottky	D_DO-221	1
WS2812b	Diode SMD ARGB	D3, D4, D5, D6	D_SMD_LED-ARGB	D_SMD_LED-ARGB	4
MODULE_COM	Stecker	J1	J_THT_CON15	SIP-15	1
BUTTON	Stecker	J2	J_THT_CON2	SIP-2	1
SERIAL	Stecker	J3	J_THT_CON6	SIP-6	1
J_USB-C	USB4105-GF-	J4	J_USB-C	GCT_USB4105-GF-A	1
ARGB_OUTPUT	Stecker	J6	J_THT_CON3	Slp-3	1
2,2uH	Spule SMD	L1	L_SMD_Spule	L_SMD_ND_NR3015T2R2M	1
900k	Widerstand SMD	R1	R_SMD_Widerstand	R_SMD_0603	1
200k	Widerstand SMD	R2	R_SMD_Widerstand	R_SMD_0603	1
>10k	Widerstand SMD	R3	R_SMD_Widerstand	R_SMD_0805	1
100k	Widerstand SMD	R4, R5, R8, R9	R_SMD_Widerstand	R_SMD_0805	4
5k1	Widerstand SMD	R6, R7	R_SMD_Widerstand	R_SMD_0805	2
4k7	Widerstand SMD	R10	R_SMD_Widerstand	R_SMD_0603	1
U_TLV62569P		U1	U_TLV62569P	SOT50P160X60-6N	1
ESP32-C3-WROOM-02-N4	WiFi Modules (802.11) (Engineering Samples) SMD module, ESP32-C3, 4MB SPI flash, PCB antenna, -40 C+85 C	U2	ESP32-C3-WROOM-02-N4	MODULE_ESP32-C3-WROOM-02-H4	1
U_DS18B20	Temperature Sensor Digital, Local -55°C~125°C 12 b 8-uMAX-EP| 8-uSOP-EP	U3	U_DS18B20	TO-92_DS18B20	1