USB-C to UART

+3V3
VCCIO
3v3
RESET
C4 0.1u
GND

J3
USB_C_Receptacle_USB2.0_14P
VBUS — A4 → +5V R3 5.1k → GND
CC1 — B5 R8 27
CC2 — A5
D− — A7
D− — B7
D+ — A6
D+ — B6
SHIELD S1
GND A1

C6 47p
GND
C5 47p
GND
R9 27 → USBDM
R8 27 → USBDP

+5V VCCIO
U2
FT231XS
3v3 13 — 3V3OUT   VCC 15
                   VCCIO 3
USBDM 12 — USBDM   TXD 20 — R6 1 → U0TXD
USBDP 11 — USBDP   RXD 4 — R7 1 → U0RXD
RESET 14 — RESET   RTS 2 — RTS
                   CTS 9 —
                   DTR 7 — DTR
                   DSR 8 —
                   DCD —
                   RI —
CBUS0 18
CBUS1 17   JP1 R4 22k R5 22k D2 LED → +3V3
CBUS2 10   JP2
CBUS3 19   D3 LED
GND 6 GND 16
GND
+3V3

ESP32-C3-wroom-02

+3V3
C3 10u   C2 0.1u   R1 10k   → +3V3   EN
GND   GND   C1 1u
GND

U3
ESP32-C3-WROOM-02
EN 2 — EN   3V3 1
IO0 18 — IO0   IO20/RXD 11 — U0RXD
IO1 17 — IO1   IO21/TXD 12 — U0TXD
IO2 16 — IO2
IO3 15 — IO3
IO4 3 — IO4
IO5 4 — IO5
IO6 5 — IO6
IO7 6 — IO7
IO8 7 — IO8
IO9 8 — IO9
IO10 10 — IO10
IO18 13 — IO18
IO19 14 — IO19
GND 9
GND

USB to UART programmer

DTR — R10 10k — Q1 MMBT2222A — EN
RTS — R11 10k — Q2 MMBT2222A

DTR	RTS	-->	EN	IO0
1	1		1	1
0	0		1	1
1	0		0	1
0	1		1	0

Connector Pins

J1
Conn_01x15_Pin   GND
1
2 → +3V3
3
4 EN
5
6 IO4
7 IO5
8 IO6
9 IO7
10
11 IO8
12 IO9
13 → +5V
14
15
GND

J2
Conn_01x15_Pin   GND
1
2 IO0
3 IO1
4 IO2
5 IO3
6
7 IO10
8
9 U0RXD
10 U0TXD
11
12 IO18
13 IO19
14
15
GND

Reset and Boot buttons

SW1
SW_Push
C7 0.1u → EN
GND

SW2
SW_Push
C8 0.1u → IO9
GND

Programmable LED

IO8 — R12 22k — D4 LED → GND

Voltage Regulator

+5V
R2 2k
D5 LED
C10 22u
U4
AMS1117-3.3
3 VI   VO 2 → +3V3
   GND 1
C9 22u
GND

sphuro
Sheet: /
File: riscy.kicad_sch
Title:
Size: A3   Date: 7/01/25   Rev:
KiCad E.D.A. 8.0.8   Id: 1/1