Circuitriton

ESP-Config V1

(ESP-Configurator)

1 Quick Overview

The ESP-Config V1 is an external USB to UART bridge that facilitates efficient communication between Espressif SoCs and a host device. It utilizes a Silicon Labs CP210x to support the widely used RS232 protocol for data transmission. This device is designed to save development time, which minimizes the number of required components, saving valuable PCB space and reducing cost per board. As a result, the ESP-Config V1 offers a cost-effective solution for integrating USB connectivity into both existing and new applications.

2 Features

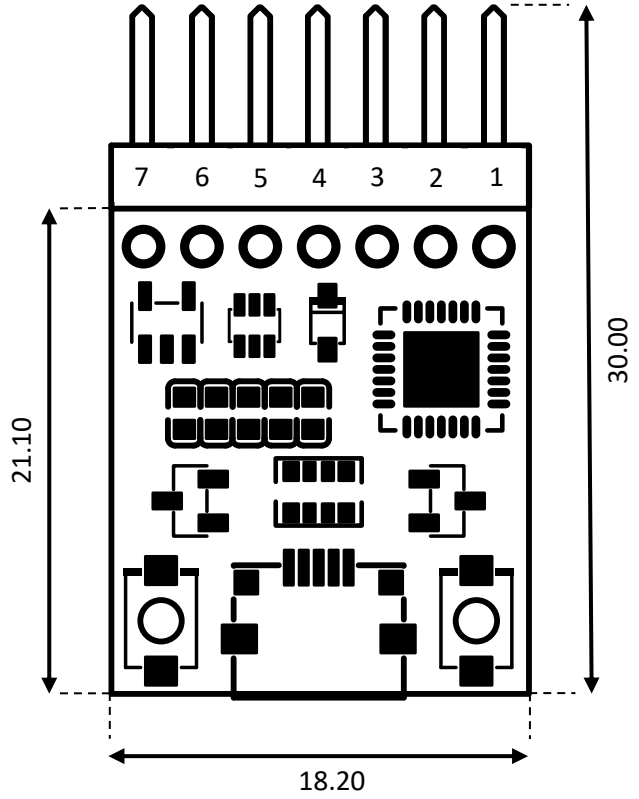
- CP2102 USB-to-UART bridge
- 5V and 3V3 tolerant
- 500mA onboard regulator
- Auto reset circuitry
- SPST manual bootloader override

3 Electrical Characteristics

Refer to CP2102 datasheet for transceiver specifications.

Symbol	Parameter	Typical	Max	Unit
V_{IN}	**Supply Voltage**	**5**		**V**
V_{OUT}	**Output Voltage**	**3.3**		**V**
		5		
I_{OUT}	**Current available to SoC**		**500**	**mA**

4 Diagram (mm)

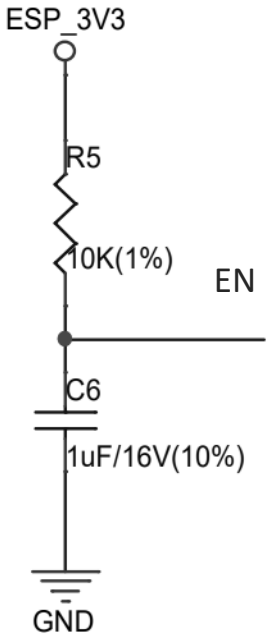


5 Pinout

Pin	Symbol	Function
1	3V3	3.3V output LDO
2	IO0	Boot
3	EN	Enable
4	TXD	Transmit data
5	RXD	Receive data
6	GND	Ground reference
7	5V	5V output

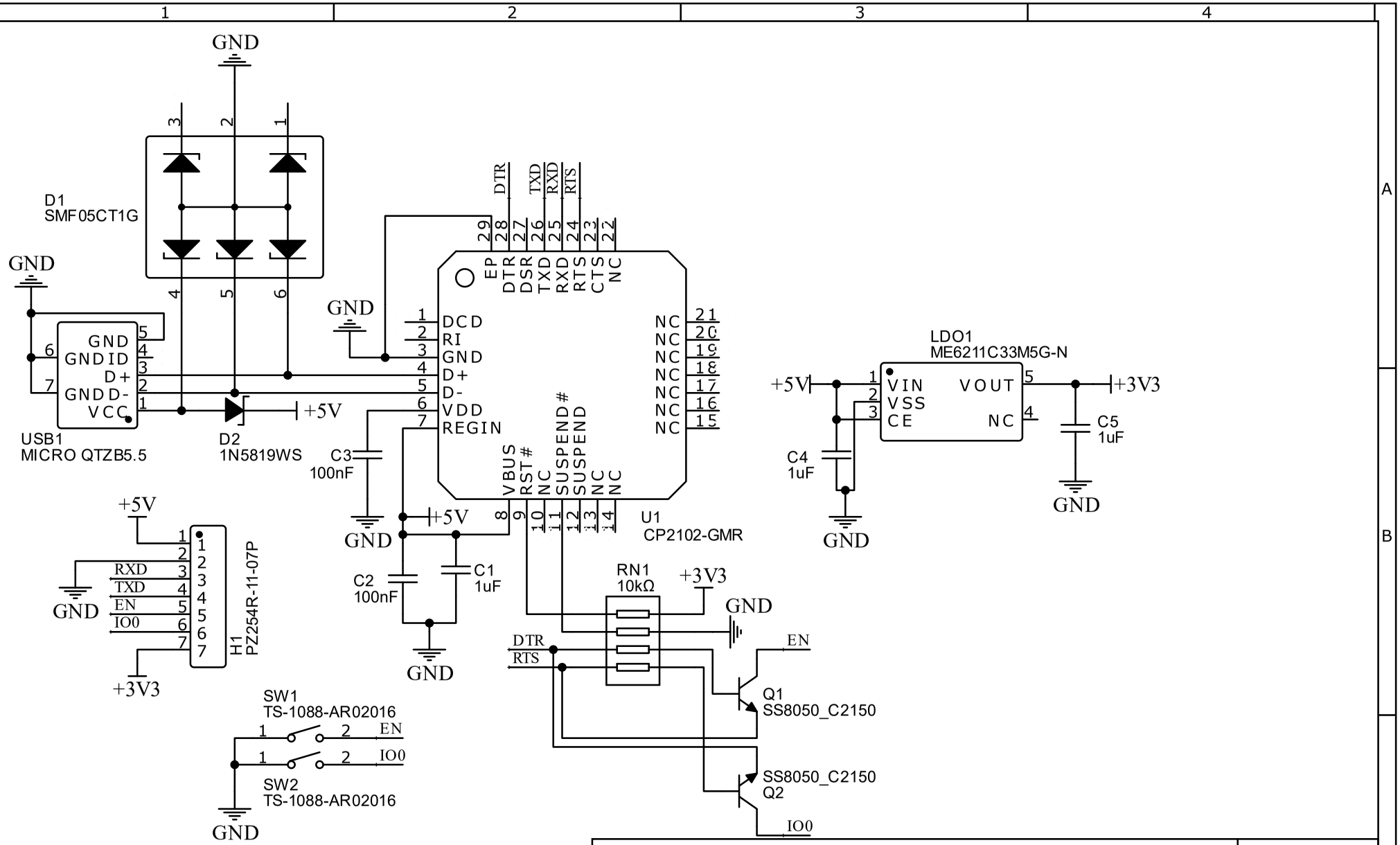
6 Implementation Guidelines

The ESP-Config V1 does NOT include pull-up resistors on EN. It is recommended to include the following schematic when creating a custom board.



Recommended PCB Layout

Tolerance ±0.05 mm



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