

PRODUCT DATASHEET



Soldered CP2102 USB to UART Breakout

333393

USB-C to UART adapter with the CP2102N, 3.3 V logic, a 5 V or 3.3 V VCC switch and an FTDI-compatible header.

Full product documentation, files and tutorials: solde.red/333393

CORE ATTRIBUTES

SKU **333393**ORIGIN **HR**BARCODE **732388636303**

DESCRIPTION

The **CP2102 USB to UART Breakout** connects your computer's USB port to the serial pins of a microcontroller. UART is the two-wire serial link (TX and RX) most boards use to take new code and print messages, and this board turns it into a COM port on your computer.

It uses the **CP2102N** from Silicon Labs and a **USB-C** connector. The 6-pin FTDI header has the pin order most USB serial adapters use, so it plugs straight into boards such as the Arduino Pro Mini. The DTR pin resets that kind of board for you before each upload.

A slide switch sets the VCC pin to **5 V or 3.3 V**, so the adapter can also power the board you are programming. The TX and RX lines stay at **3.3 V logic** in both positions.

Two more headers give you every other line on the chip: RTS, CTS, DSR, DCD and RI, four GPIO pins, the suspend outputs and the 5 V and 3.3 V rails. TX, RX and power LEDs show what the board is doing.

Note:

- The UART pins use 3.3 V logic. The switch changes only the voltage on the VCC pin.
- Connect the TXD pin of the adapter to the RX pin of your board, and RXD to TX.

TECHNICAL DETAILS

- **Chip:** Silicon Labs CP2102N-A02, USB to UART bridge
- **USB:** USB-C, USB 2.0 Full Speed

- **Baud rate:** up to 3 Mbaud
- **Logic level:** 3.3 V
- **VCC output:** 5 V or 3.3 V, set with a slide switch
- **3.3 V regulator:** SE5218
- **Protection:** 500 mA fuse on the USB 5 V line
- **UART lines:** TXD, RXD, RTS, CTS, DTR, DSR, DCD, RI
- **Other pins:** GPIO0 - GPIO3, SUSP, SUSPb
- **FTDI header:** DTR, RXD, TXD, VCC, CTS, GND
- **Side headers:** 6-pin (GND, GND, 5 V, 3.3 V, RI, DCD) and 8-pin (GPIO0 - GPIO3, SUSP, SUSPb, RTS, DSR), 2.54 mm pitch
- **LEDs:** TX, RX and power; cut a jumper to turn the power LED off
- **Dimensions:** 38 × 22 mm
- **Mounting holes:** 2 × 3.2 mm

SPECIFICATIONS

INTERFACE	Uart, Usb
QWIIC COMPATIBLE	No
BREADBOARD COMPATIBLE	Yes
IC PART NUMBER	CP2102N-A02-GQFN24
SUPPLY VOLTAGE MIN V	5
SUPPLY VOLTAGE MAX V	5
LOGIC LEVEL	3V3 Only
MAX OUTPUT CURRENT A	0.5
PROTECTION FEATURES	Overcurrent

DOCUMENTS

Main IC Datasheet · EN	https://cms.soldered.com/products/333393/documents/ic-datasheet/333393_ic-datasheet_8d15ab.pdf
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LINKS

Pinout	https://cms.soldered.com/products/333393/media/333393_pinout-png_bb0856.png
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