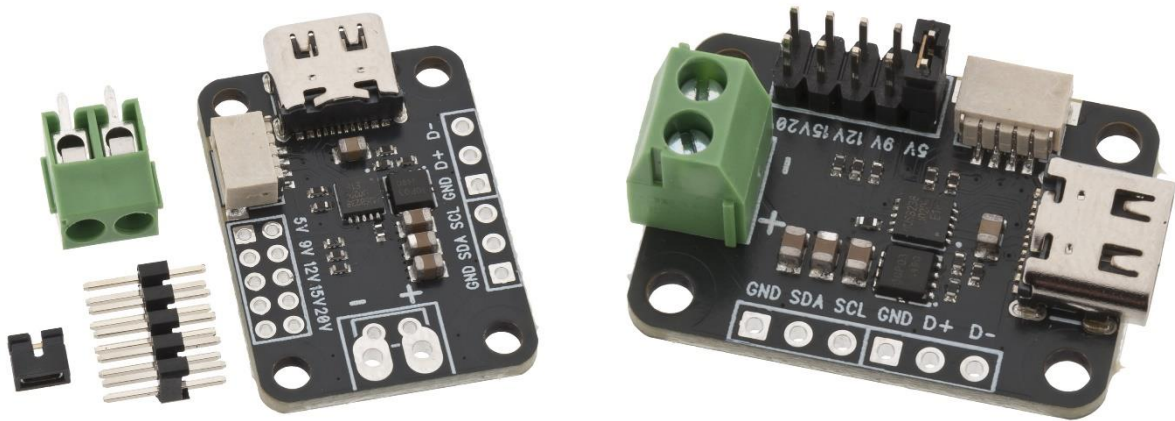


# USB-C PD-Trigger 5-20V



This module, when connected to a PD (Power Delivery) enabled USB power supply, will negotiate with the power supply to output a selectable voltage from 5V up to 20V. To configure the output voltage, simply place the jumper on the corresponding pins. Since the PD controller is configurable via I2C, these pins are also exposed for advanced users.

The I2C pins are available both as a standard 2.54mm header and as a QWIIIC connector for solderless connectivity.

Please note that a PD compatible USB power supply that can provide the requested voltage must be used. This board will not generate voltages on its own and will revert to a safe 5V 500mA if PD negotiation fails.

Included parts:

- 1x 2-pin 3.5mm pitch screw terminals
  - 1x 2x5-pin 2mm pin header
  - 1x 2-pin 2mm jumper
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## Functions

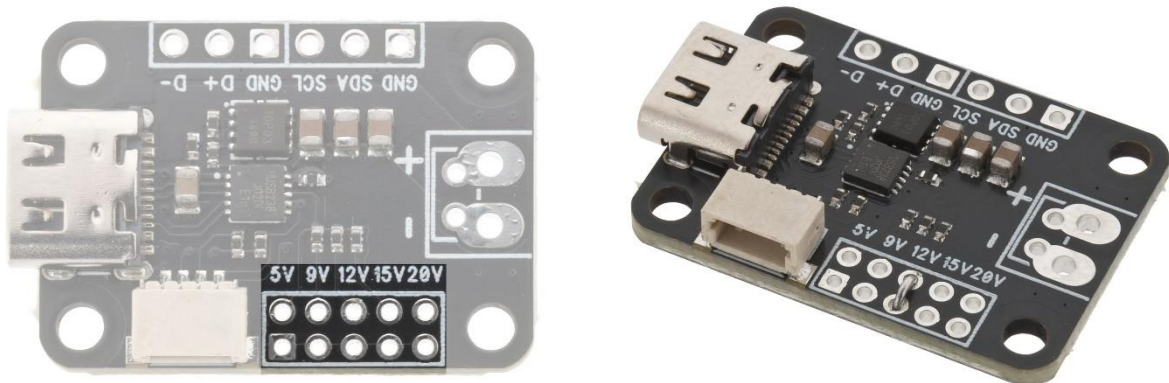
- Jumper to select voltage
- I2C configurable, QWIIC compatible
- Works with all PD enabled USB chargers
- Small size

## Specifications

- Output voltages: 5V, 9V, 12V, 15V, 20V
  - Output current: max 3A
  - USB standards: PD3.0, Type-C V1.4, Apple Divider 3, BC1.2 SDP, DCP, CDP
  - Dimensions: 28 x 20 mm
  - Mounting holes:  $\varnothing 2.5$  mm / 23 x 15 mm
- 

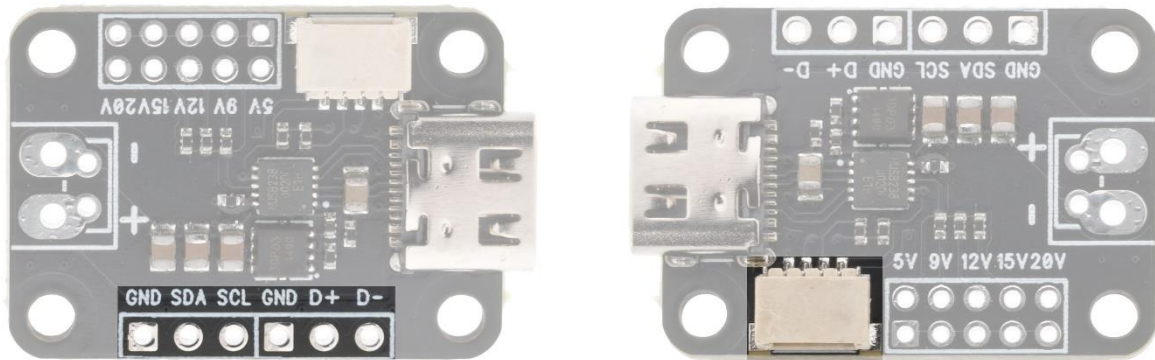
## Connections

Voltage selection:



Before use, the module must be configured to request the desired voltage from a connected USB power supply. A 2x5-pin header is included in the package and can be soldered to the board for a quick and easy way to change the voltage using the included jumper. For a more permanent and low-profile application, a simple wire or component lead can be used instead of the entire pin header.

I2C & USB pins:

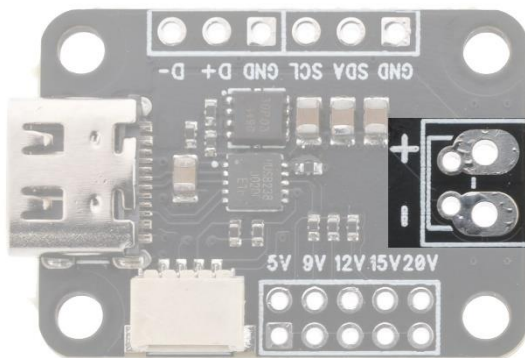


To configure the PD controller and change the output voltage and current limit from a microcontroller, I2C pins are broken out both as individual pins and as a JST-SH 1.0mm QWIIIC connector. The PD controller works as an I2C slave on address 0x08. I2C takes priority over the manual voltage setting. External pullup resistors for SCL/SDA must be used.

Documentation and example code are provided below.

The D+/D- pins from the USB connector are also broken out to provide easy access to the USB data pins.

Voltage output:



The voltage from the USB power supply is provided on the large pads opposite the USB connector. Please be observant of the polarity markings! The pads will fit either a 2.54mm pitch connector (screw terminal or pin header) or the included 3.5mm pitch screw terminal. Wires can also be soldered directly to the board for space-constrained applications.

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## Datasheet and example code

- [HUSB238 Datasheet](#)
  - [HUSB238 Registers](#)
  - [Arduino Library](#)
  - [Python Driver](#)
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## Mechanical dimensions

