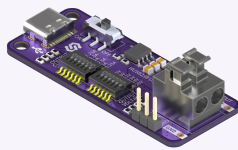


PRODUCT DATASHEET



Soldered HUSB238 USB-C Power Delivery Breakout

333376

A USB-C PD sink board with the HUSB238. Pick 5 to 20 V and 1.25 to 3.25 A on two DIP switches, or request them over I2C.

Full product documentation, files and tutorials: solde.red/333376

CORE ATTRIBUTES

SKU 333376

DIMENSIONS 54.0 × 22.0 × — mm

ORIGIN HR

BARCODE 732388637706

DESCRIPTION

The HUSB238 USB-C Power Delivery Breakout asks a USB-C PD charger for a fixed voltage and passes it to a screw terminal and header pins. The **HUSB238** handles the negotiation on its own, so you get 9, 12 or 20 V out of a charger without writing any code.

One DIP switch bank sets the voltage, **5, 9, 12, 15, 18 or 20 V**, and the other sets the current request, **1.25, 1.5, 2, 2.5, 3 or 3.25 A**. With every switch off, the board asks for 20 V and 3.25 A. If the charger does not offer the voltage you set, the HUSB238 takes the next lower one it does offer. An AO4459 P-channel MOSFET switches the output, and the HUSB238 turns it off when the input rises above **1.2 times** the requested voltage. A purple LED lights while VOUT is on.

VOUT and GND come out on a **5.0 mm screw terminal** and on two single 2.54 mm pins. SDA, SCL and GND sit on a 3-pin header: at I2C address **0x08** you can read what the charger offers and request a different profile, using the Soldered HUSB238 Arduino and MicroPython libraries. A slide switch disconnects the board from USB-C.

TECHNICAL DETAILS

- **Controller:** HUSB238 (HUSB238_002DD), USB PD 3.0 sink
- **Input:** USB-C receptacle
- **Voltage request:** 5, 9, 12, 15, 18 or 20 V, by DIP switch or I2C
- **Current request:** 1.25, 1.5, 2, 2.5, 3 or 3.25 A, by DIP switch or I2C
- **Output switch:** AO4459 P-channel MOSFET, 30 V
- **Output:** VOUT and GND on a 2-pin 5.0 mm screw terminal and 2× 1-pin 2.54 mm header
- **I2C:** address 0x08 (fixed), SDA and SCL 2.5 to 5.5 V, no pull-ups on the board

- **Protection (HUSB238):** output off above 1.2x the requested voltage; falls back to 5 V at 150 °C junction temperature
- **Power switch:** slide switch between USB-C VBUS and the board
- **Indicator:** purple LED on VOUT, disabled by cutting JP1
- **Mounting holes:** 2× 3.2 mm
- **Dimensions:** 54 × 22 mm

SPECIFICATIONS

INTERFACE	I2C
QWIIC COMPATIBLE	No
I2C ADDRESS DEFAULT	0x08
I2C ADDRESS CHANGEABLE	No
BREADBOARD COMPATIBLE	Yes
IC PART NUMBER	HUSB238
SUPPLY VOLTAGE MIN V	5
SUPPLY VOLTAGE MAX V	20
LOGIC LEVEL	3V3 Or 5V
MAX OUTPUT CURRENT A	3.25

DOCUMENTS

Main IC Datasheet · EN	https://cms.soldered.com/products/333376/documents/ic-datasheet/333376_ic-datasheet_f889a9.pdf
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LINKS

Arduino Library	https://github.com/SolderedElectronics/Soldered-HUSB238-Arduino-Library
MicroPython Module	https://github.com/SolderedElectronics/Soldered-HUSB238-MicroPython-Library
mim_package	https://checkmim.com/packages/solderedelectronics+Soldered-HUSB238-MicroPython-Library
Pinout	https://cms.soldered.com/products/333376/media/333376_pinout-png_15fd03.png

GALLERY

