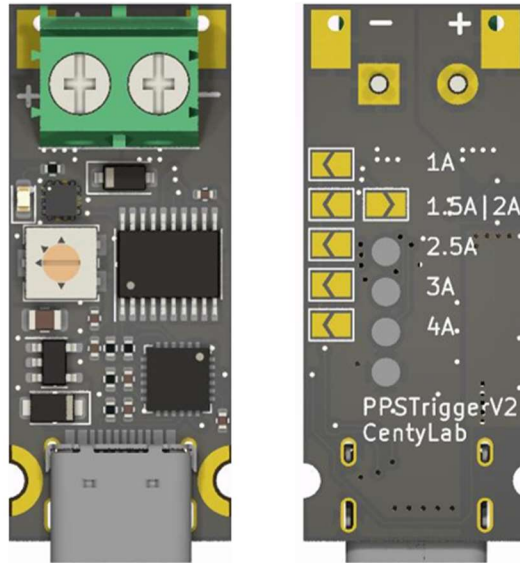


User Manual for PPSTriggerV2

PPSTriggerV2 is a USB-PD trigger board that supports PD3.0 and PD3.1 in constant voltage and constant current mode.

PPSTriggerV2 can operate up to 3A continuous.



- Default (no jumper): CV mode. Max voltage is set by the potentiometer. Maximum current rated for cable/power supply*.
- 1A jumper: CC mode at 1A. Max voltage is set by the potentiometer.
- 1.5A jumper: CC mode at 1.5A. Max voltage is set by the potentiometer.
- 2A jumper: CC mode at 2A. Max voltage is set by the potentiometer.
- 2.5A jumper: CC mode at 2.5A. Max voltage is set by the potentiometer.
- 3A jumper: CC mode at 3A. Max voltage is set by the potentiometer.
- 4A jumper: No application

On board LED only light up when there is power at the output. LED intensity is visual cue for set voltage (high or low)

Note: If the device does not fully support PPS, constant current (CC) mode might not be available.

*Charger with only fixed PDO will not support constant current (CC) mode but only CV mode with step voltage. Using fixed PDO charger with load higher than 3A continuously can lead to thermal shut down of the circuit.

Charger used in this example is Ugreen Nexode 140W PD 3.1

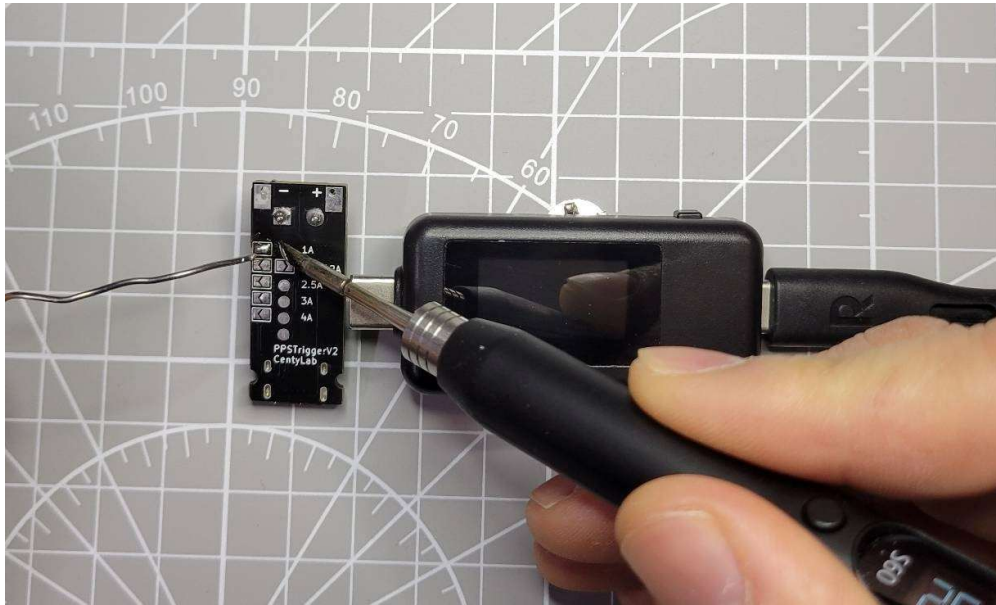
- 5V @ 3A
- 9V @ 3A
- 12V @ 3A
- 15V @ 3A
- 20V @ 5A
- 3.3V – 21V @ 5A



No jumper – CV mode



Voltage can be adjusted from 3.3V to 21V



Jumper at 1A – CC mode



Set max voltage at 17.1V at no load.



Attaching 8 Ohm load reduce voltage to 8.75V to maintain 1A current limit.



Jumper at 2A – CC mode



Set max voltage at 21V at no load.



Attaching 8 Ohm load reduce voltage to 17.3V to maintain 2A current limit.

Special cases



No jumper (CV mode) + non PD charger

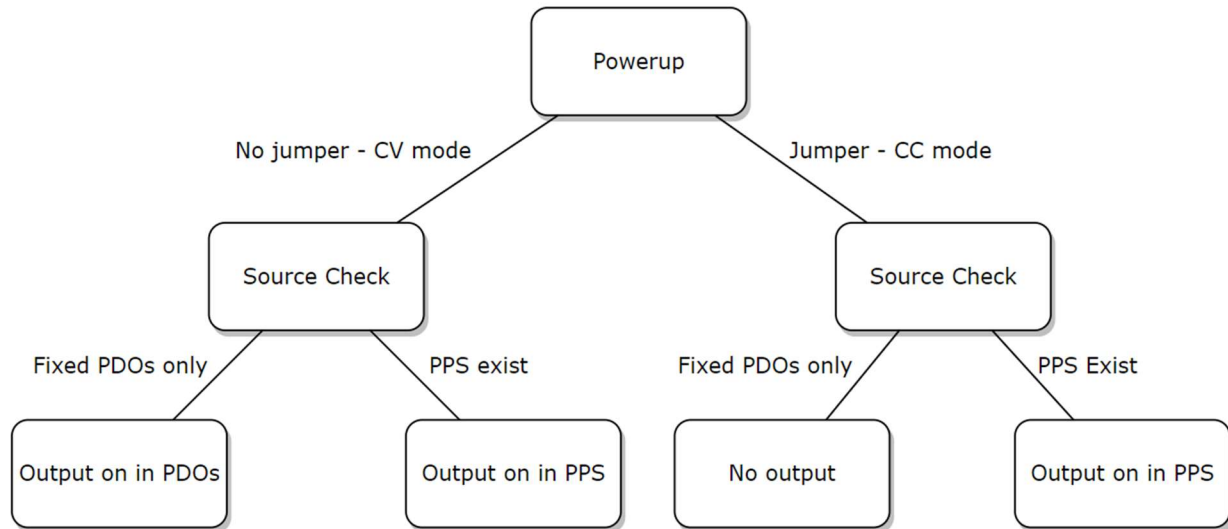
Trigger board will just act as 5V pass through. Output ON



Jumper (CC mode) + non PD charger

Trigger board will not allow power to pass through. Output OFF

Device decision tree



Glossary

- CV: Constant voltage
- CC: Constant current
- Fix PDO: Fixed Power Data Object. Standard fixed power profile is 5V, 9V, 12V, 15V and 20V.
- PPS: [Programable Power Supply](#) mode. This feature is optional but supported by many USB-PD chargers as of 2024. Allow downstream device to request voltage ranging from 3.3V up to 21V with 20mV increment and 50mA increment in current limit.

Disclaimer

The device is an evaluation board to test out the PPS capability of newer chargers. There is no guarantee the device can operate in long term conditions and can damage downstream devices if misused or abused.