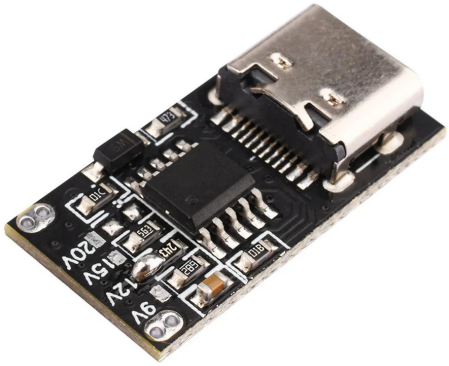
USB-C Trigger module

Module for selecting voltage from a USB-C power source
User manual



Always measure the voltage at the module output before connecting a load.

www.rotorama.com

Contents

1. Product description

1.1 What it is for

1.2 Specifications and package contents

2. Use

2.1 Board overview

2.2 Selecting the output voltage

2.3 Connection and start-up

2.4 Power source and cable requirements

3. Safety and troubleshooting

3.1 Safety instructions

3.2 Troubleshooting

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

4.2 Disposal of electrical equipment

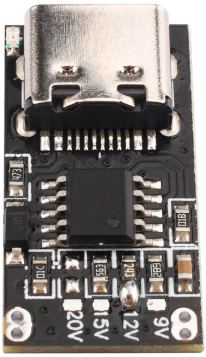
5. Warranty and rights arising from defective performance

1. Product description

1.1 What it is for

The **USB-C Trigger module** is a small board that requests a selected voltage from a USB-C power source – a USB-C mains adapter or a power bank – and delivers it to two solder pads, **+** and **−**. This lets you power devices without a USB-C input from an ordinary USB-C source: for example a soldering pen, a charger, FPV goggles or other equipment.

The module supports the PD 3.0/2.0, PPS/QC4+, QC 3.0/2.0, FCP and AFC protocols. The output voltage of 5, 9, 12, 15 or 20 V is selected by bridging solder pads; it is factory-set to **12 V**. The selected voltage must be one the USB-C power source can supply.



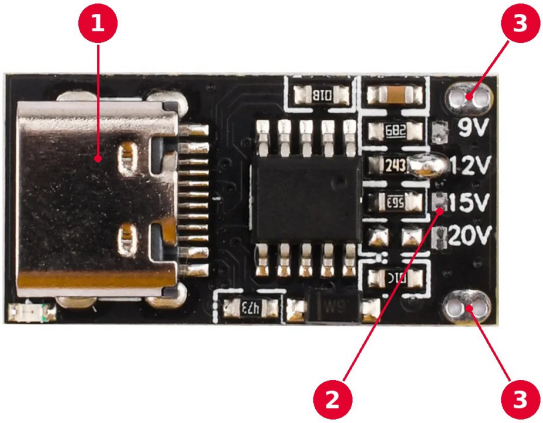
USB-C Trigger module

1.2 Specifications and package contents

Product designation	USB-C Trigger module
Input	USB-C connector
Supported protocols	PD 3.0/2.0, PPS/QC4+, QC 3.0/2.0, FCP, AFC
Output voltage	5 / 9 / 12 / 15 / 20 V, selected by bridging solder pads
Factory setting	12 V
Output	solder pads + and −
Dimensions	23 × 12 × 4 mm
Package contents	1× USB-C Trigger module
Not included	USB-C power source or power bank, USB-C cable, output wires and connectors

2. Use

2.1 Board overview



Top view of the board

① **USB-C input connector** – connect the power source or power bank here.

② **Output voltage selection pads** labelled 9V, 12V, 15V and 20V.

③ **Output solder pads + and −** for connecting the powered device.

2.2 Selecting the output voltage

To select a voltage, bridge the pad next to the required value to the adjacent pad with solder. The **12V** value is bridged this way at the factory (see the picture in Chapter 2.1).

Output voltage	Bridged pad
5 V	none
9 V	9V
12 V (factory setting)	12V
15 V	15V
20 V	20V

- **No more than one** pad may be bridged at any time, none for 5 V. Before setting a different value, remove the solder from the original pad, for example with a desoldering pump or desoldering wick.
- Always solder the pads with both the power source and the load disconnected, and after soldering check that the solder has not shorted any neighbouring components.

2.3 Connection and start-up

① Solder wires or a connector suitable for the powered device to the **+** and **−** output pads. Choose the wire cross-section according to the current drawn by the device.

② Insulate the joints and the board, for example with heat-shrink tubing. The module has no housing, and its pads and components must not touch any metal objects.

③ Connect the USB-C power source or power bank to connector ① with a USB-C cable.

④ Measure the output voltage with a multimeter and check the polarity of the output pads – by the marking on the board and by measurement.

⑤ Connect the load only once the voltage and polarity match the powered device.

2.4 Power source and cable requirements

The USB-C power source or power bank used must be able to supply the required output voltage. If the source cannot provide the requested voltage, the output will carry **the maximum voltage the source is able to supply**.

The output voltage may therefore differ from the one you selected. Always measure it before connecting a load.

- Check that the power source supports the selected voltage and one of the protocols listed in Chapter 1.2 – see the label or the documentation of the power source.
- The power rating of the source must be sufficient for the powered device. An underrated source may shut down or limit its output under load.
- Use a good-quality USB-C cable rated for the current drawn by the device.

3. Safety and troubleshooting

3.1 Safety instructions

- The selected output voltage must match the input voltage of the powered device. Connecting a device to a higher voltage than it can withstand may destroy it.
- Observe the polarity. Reversing + and − may damage the powered device.
- The module is a bare board without a housing. Protect it from moisture, dust and conductive objects, and do not place it on a metal or otherwise conductive surface.
- Carry out soldering and modifications only with both the power source and the load disconnected.
- During operation, check the temperature of the module, the cable and the wires. If they get excessively hot, disconnect the power.
- Do not connect batteries directly to the module output – always charge them with a charger.
- The product contains small parts. Keep it out of the reach of children.
- Use the module in accordance with the regulations of the country in which you operate it – the law of that country is decisive.

3.2 Troubleshooting

Problem	Cause and solution
No voltage at the output	Check the power source, the USB-C cable and the connection to connector ①. Check the solder joints on the output pads.
Voltage is lower than selected	The power source does not support the selected voltage and supplies the highest voltage it can. Use a source that supports the selected voltage. Also check that the pad is reliably bridged.
5 V at the output although a different value is selected	The power source does not support any of the fast-charging protocols, or the pad is not bridged. Try a different power source and check the pad bridge.
Voltage does not match any setting	Most likely more than one pad is bridged. Disconnect the power source and remove the excess solder.
Device shuts down or restarts under load	The power of the source, the cable or the wire cross-section is insufficient. Use a more powerful source, a better cable or thicker wires.

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

4.2 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

5. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 4.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.