

CY4535 EZ-PD™ barrel connector replacement-lite (BCR-LITE) Evaluation kit



The CY4535 EZ-PD™ barrel connector replacement-lite (BCR-LITE) EVK is an evaluation platform for customers who want to replace an existing barrel/power input connector with a USB-C connector using the CYPD3178 device. Implementing this solution in an end-product allows the system to be powered by any USB Type-C compliant power adapter or USB power adapter that supports legacy charging standards.



Step 1:

The CYPD3178 device is capable of negotiating 5 V VBUS when attached to USB-C power adapters and can negotiate 5 V or higher when attached to certain legacy charging power adapters as shown in the table below.

Protocol supported	Possible VBUS voltages that can be negotiated by CYPD3178
USB-PD	5 V
USB Type-C	5 V
BC1.2	5 V
Apple charging	5 V
QC 2.0	5 V, 9 V, 12 V
AFC	5 V, 9 V, 12 V, 15 V, 20 V

Select the max VBUS voltage using the rotary switch (SW1) based on the above table and voltage range requirements of the external load. Note that the negotiated VBUS will be the highest voltage that can be supported by the power adapter that is within the selected max VBUS voltage using SW1. Switch SW1 has 5 positions (1 through 5) that correspond to 5 V, 9 V, 12 V, 15 V and 20 V respectively.

Step 2:

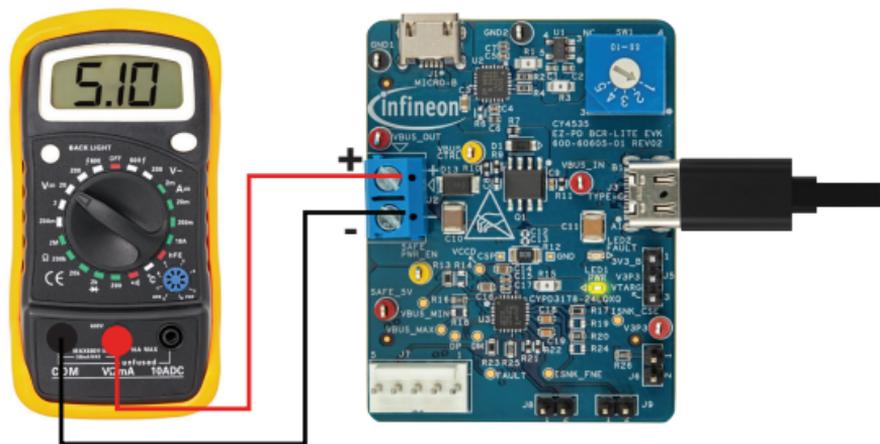
Connect a USB-PD / USB-C / legacy charging USB power adapter to the USB-C connector of the CY4535 EZ-PD™ BCR-LITE EVK board. Observe that the green Power LED (LED1) turns ON.



From USB-C power adapter

Step 3:

Measure the DC_OUT voltage by connecting a multimeter to the terminal block J2.



Note: To register any changes in the VBUS selector switch position, the EVK board requires a power cycle.

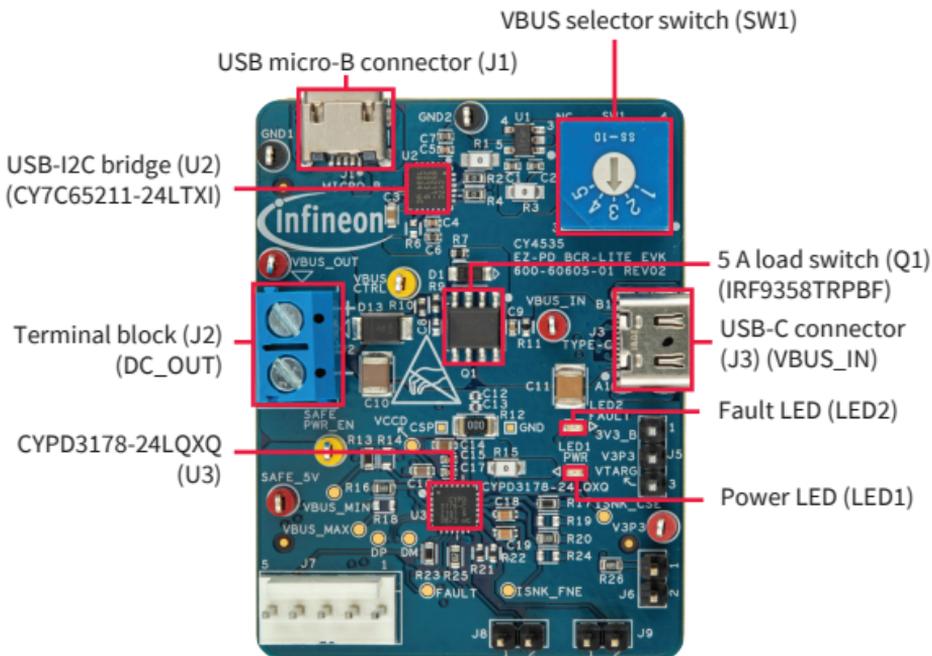
Step 4 (Optional):

As an optional step, steps 1 to 3 can be repeated with an external load connected to the DC_OUT terminal block J2.

See the CY4535 EZ-PD™ BCR-LITE EVK Kit guide for more details.

Warning:

- Ensure that the voltage setting on SW1 does not exceed the voltage rating of the external load connected to J2.
- Ensure that the maximum current that can be consumed by an external load does not exceed 900 mA in the default configuration or 5 A with resistor setting changes.



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