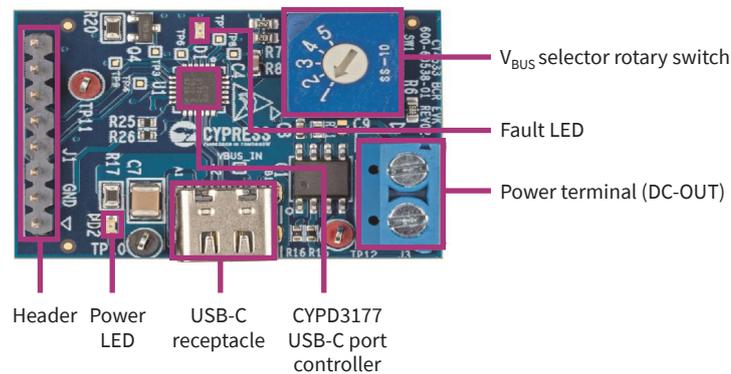


Solution brief

EZ-PD™ BARREL CONNECTOR REPLACEMENT (BCR) KIT

The CY4533 EZ-PD™ barrel connector replacement (BCR) kit provides a simple evaluation platform for the EZ-PD™ barrel connector replacement (CYPD3177) USB-C port controller. The BCR kit enables a developer to quickly prototype a USB power delivery (PD) input system using a USB-C connector, replacing the existing barrel connector.

EZ-PD™ BCR kit



EZ-PD™ BCR (CYPD3177) USB-C PORT CONTROLLER FEATURES

- > USB PD 3.0 certified, including programmable power supply (PSS) mode
- > Upstream facing port (UFP) only, acting as a power sink
- > Configurable PDOs, supporting 5 V, 9 V, 12 V, 15 V, 20 V, up to a 5 A
- > Configurable R_D resistor
- > V_{BUS} -to-CC short protection
- > Host programming interface (HPI) over I²C to external SoC
- > Over-voltage and under-voltage protection
- > IEC61000-4-2 ESD level 4C ESD protection on CC, 12C, V_{BUS} pins
- > 3 V to 24.5 V power supply (30 V tolerant)
- > 24-pin QFN package
- > Qualified for extended industrial temperature range (-40°C to 105°C)

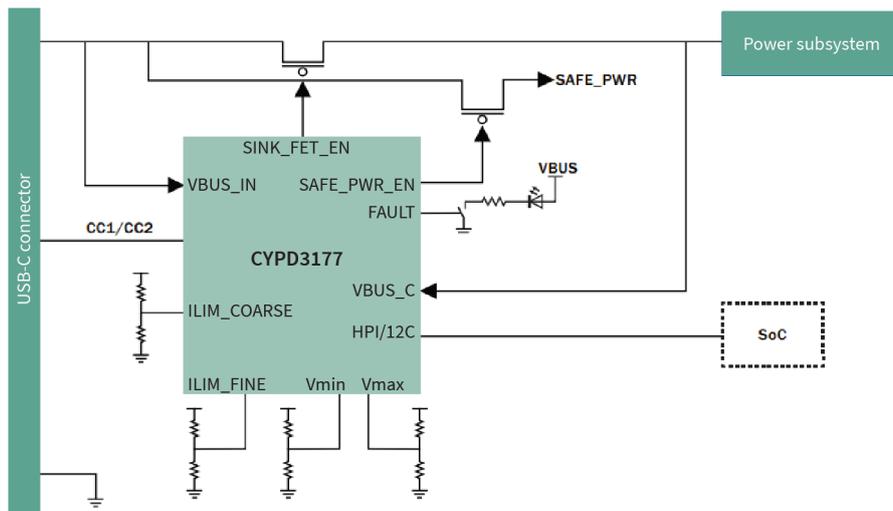
CY4533 EZ-PD™ BCR KIT FEATURES

- > USB-C receptacle for V_{BUS} -in
- > Power terminal for DC-OUT
- > Power LED and fault LED
- > V_{BUS} selection rotary switch
- > Measuring only 3.7 cm x 2.5 cm (L x W) in PCB size

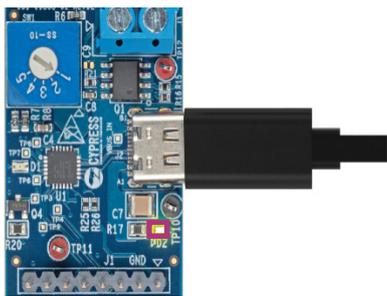
Switch position	Max V_{BUS} requested	DC-OUT voltage	Max current requested
1	5 V	5 V	900 mA*
2	9 V	9 V	900 mA*
3	12 V	12 V	900 mA*
4	15 V	15 V	900 mA*
5	20 V	20 V	900 mA*

* Can be adjusted to up to 5 A by changing resistors on the BCR kit. Please refer to CY4533 kit user guide for more details.

EZ-PD™ BCR (CYPD3177) block diagram



Replace your barrel power connector with USB-C in three, simple steps using the CY4533 EZ-PD™ BCR kit



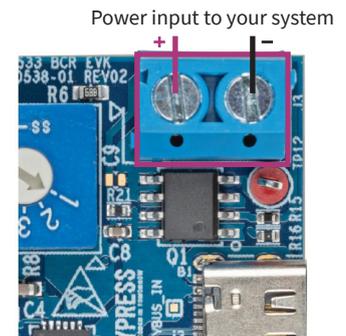
STEP 1:

Connect a USB-C power adapter (e.g. 30 W Apple USB-C power adapter) to the USB-C receptacle of the CY4533 kit. Observe the power LED (green color) as it comes ON.



STEP 2:

Select the max V_{BUS} voltage (5 V, 9 V, 12 V, 15 V, or 20 V) using the rotary switch that matches the voltage rating of the external load. The actual voltage is determined by the connected USB-C power adapter.



STEP 3:

Measure DC-OUT on the power terminal with a multi-meter to confirm that it matches the voltage rating of the external load. Connect the DC-OUT to the external load.

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