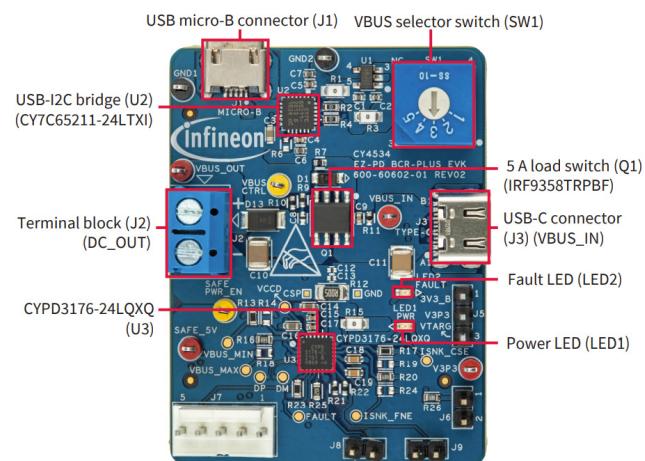


## Product brief

# CY4534 EZ-PD™ Barrel Connector Replacement-Plus (BCR-Plus) evaluation kit

The CY4534 EZ-PD™ Barrel Connector Replacement-Plus (BCR-Plus) evaluation kit is an evaluation platform for customers who want to replace an existing barrel/power input connector with a USB-C connector. Implementing this solution in an end-product allows the system to be powered by any USB-C compliant power adapter.

### EZ-PD™ BCR-PLUS kit CY4534



### Key features

- Supports USB Type-C and USB-PD Programmable Power Supply (PPS)
- Supports 2.4 A and legacy charging standards
- UFP-only with configurable RD and RD-DB
- Integrated analog blocks
- 30 V-tolerant regulator
- $V_{BUS}$ -to-CC short protection
- On-chip overvoltage protection (OVP) and overcurrent protection (OCP)
- Packages: 24-pin QFN
- Supports extended industrial temperature range (-40 °C to +105 °C)

### Key benefits

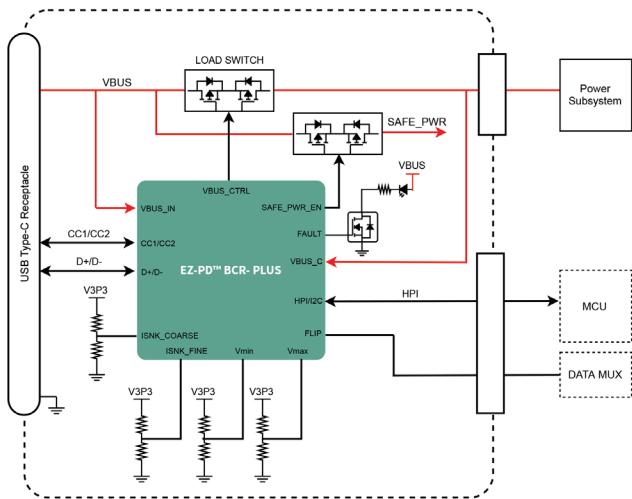
- Replacement of barrel connectors
- USB Type-C and power delivery 3.1 programmable power supply
- No expert knowledge of USB-C or USB Power Delivery required
- Interoperable with any USB-C chargers or charging ports
- USB-IF certified with market-proven USB PD stack, ensuring spec compliance and interoperability
- Supports all USB-PD profiles commonly used in USB-C power adapters and requires no firmware development
- Minimizes BOM cost for a USB-C power-sink system

### Applications

- Smart speakers
- Power tools
- Wearables
- Personal care products
- AR/VR headsets
- Digital cameras
- Game consoles
- Portable navigation
- E-Readers
- IoT devices
- Drones and robots
- Other portable electronics



## EZ-PD™ BCR-PLUS kit CY4534 block diagram

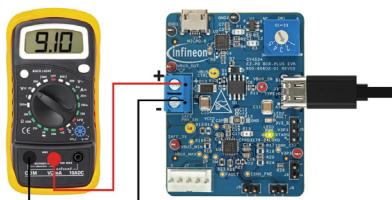


Replace your barrel power connector with USB-C in four, simple steps using the CY4534 EZ-PD™ BCR-PLUS kit:

Switch position	Max V <sub>BUS</sub> requested	DC <sub>OUT</sub> voltage*	Minimum 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

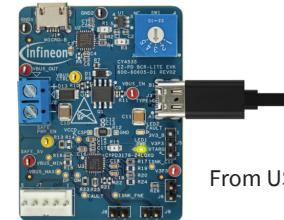
## STEP 1:

Select the max V<sub>BUS</sub> voltage using the rotary switch (SW1), which matches the voltage rating of the external load (see Step 4). The actual voltage is determined by the voltage that the USB-C power adapter can provide on the input side.



## STEP 3:

Measure the DC<sub>OUT</sub> voltage by connecting a multimeter to the terminal block J2. For example, for position 2 of switch SW1, the measured output voltage will be 9 V.



From USB-C power adapter

## STEP 2:

Connect a USB-C power adapter (preferably above 30W) to the USB-C connector of the CY4534 EZ-PD™ BCR-PLUS EVK board. Observe the power LED "LED1" (green color) turn ON.

## STEP 4:

To make a power contract at a different voltage supported by the connected USB-C power adapter, disconnect the USB-C power adapter and repeat steps 1 to 3 to observe the new voltage at terminal block J2. Optionally, steps 1 to 3 can be repeated with an external load connected to DC<sub>OUT</sub>.

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