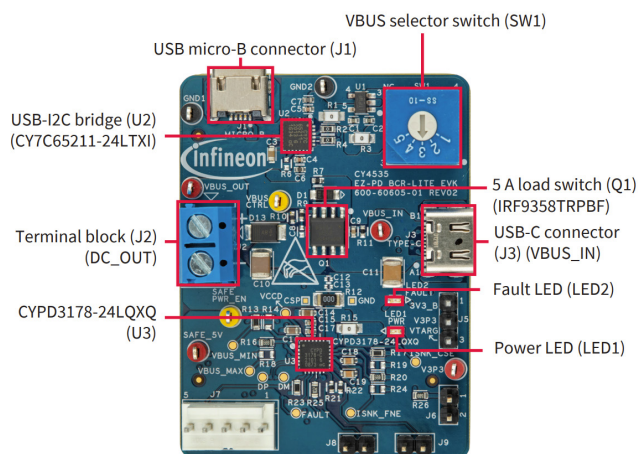


Product brief

CY4535 EZ-PD™ Barrel Connector Replacement-Lite (BCR-Lite) evaluation kit

The CY4535 EZ-PD™ Barrel Connector Replacement-Lite (BCR-Lite) 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-LITE kit CY4535



Applications

- › Smart speakers
- › Wearables
- › Personal care products
- › Cameras
- › IoT devices
- › Toys
- › E-Readers
- › Battery powered electronics



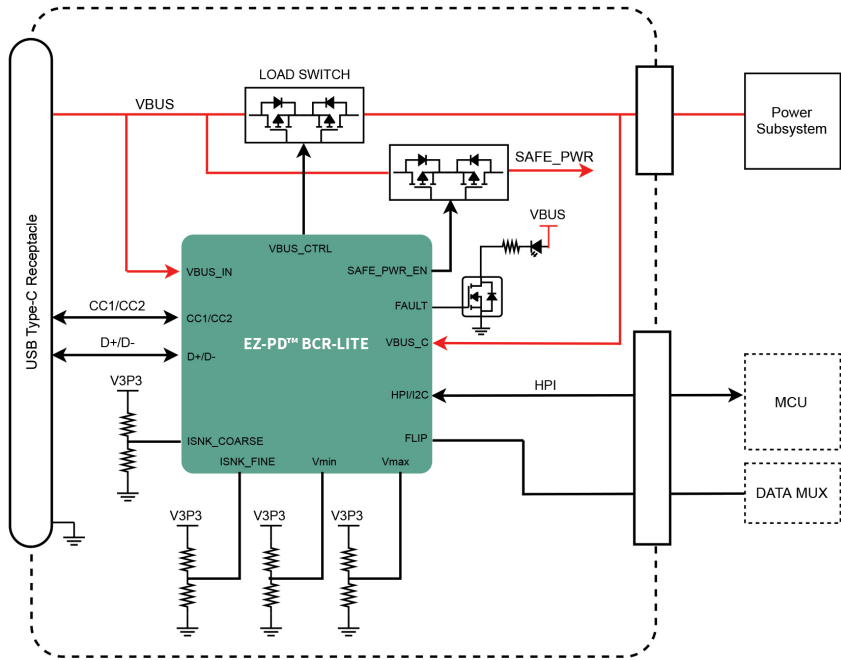
Key features

- › Supports USB Type-C charging
- › 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)
- › Packages: 24-pin QFN
- › Supports extended industrial temperature range (-40 °C to +105 °)

Key benefits

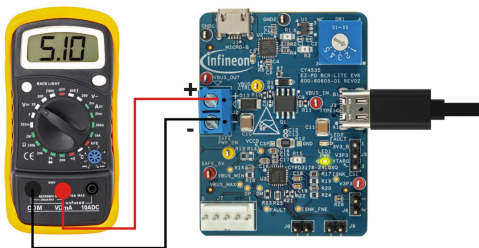
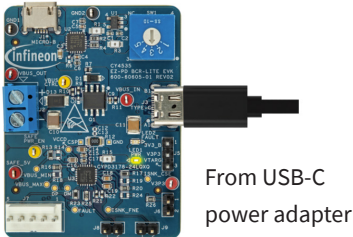
- › Easily covert incompatible power connectors to USB-C
- › No firmware development required
- › No expert knowledge of USB-C Power Delivery required
- › Interoperable with any USB-C chargers, legacy USB chargers or charging ports
- › A highly integrated solution that minimizes BOM cost for a USB-C power-sink system

EZ-PD™ BCR-LITE kit CY4535 block diagram



Replace your barrel power connector with USB-C in three, simple steps using the CY4535 EZ-PD™ BCR-LITE kit:

Protocol supported	Possible V_{BUS} 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



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.

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.

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.

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