



CC Logic for USB Type-C Applications

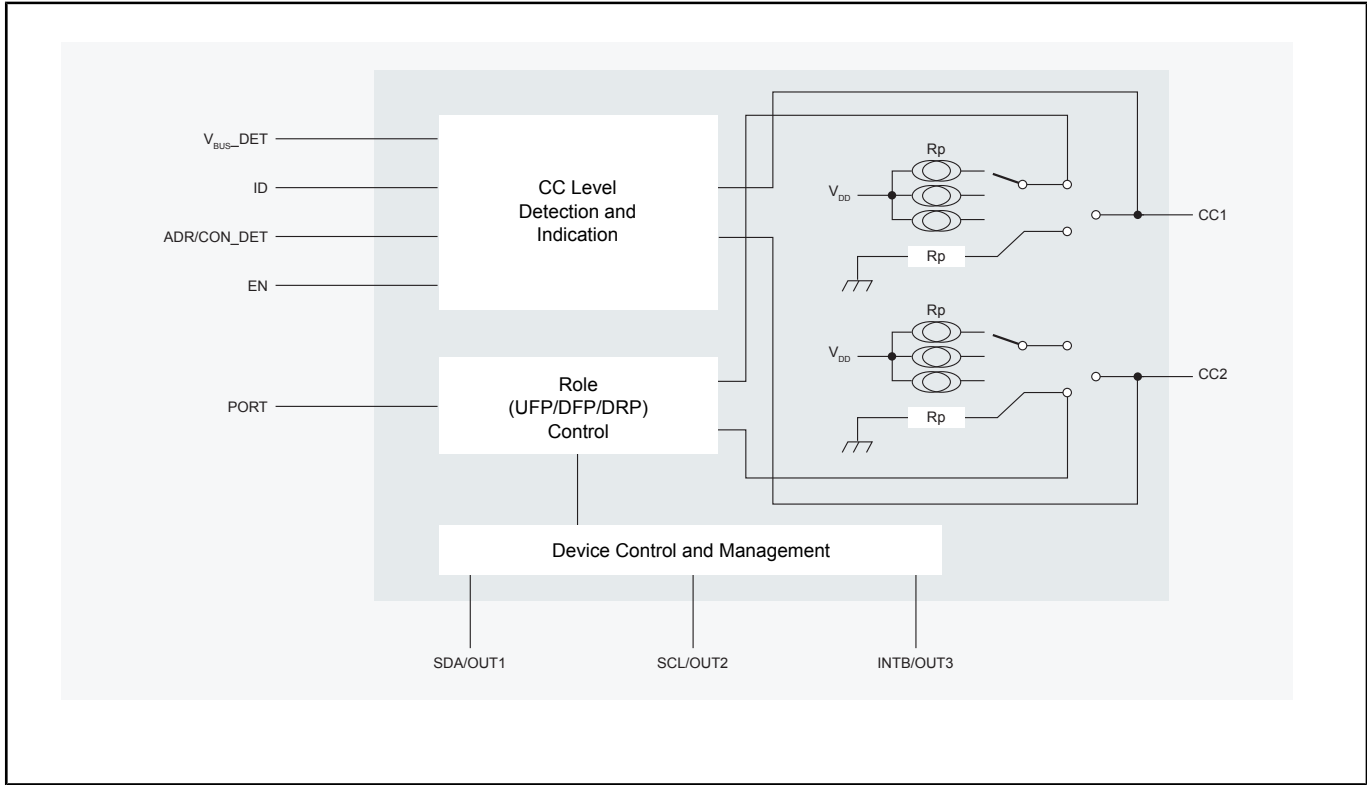
PTN5150

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PTN5150 is a small thin low power CC Logic chip supporting the USB Type-C connector application with Configuration Channel (CC) control logic detection and indication functions. The features of PTN5150 enable USB Type-C connector to be used in both host and device ends of the Type-C cable. It can support Type-C to USB legacy cables and adapters defined in USB Type-C Spec. PTN5150 can work autonomously, or can connect to a controller through an I²C-bus interface.

PTN5150 can be configured to dual role, host or device mode through an external configuration pin or through an I²C interface. The CC control logic detection and indication block supports 3 current modes (default current 500 mA/900 mA, medium current 1.5 A and high current 3.0 A) in DFP advertisement's perspective. When in UFP advertisement's perspective, the control logic will detect if a DFP with a different pullup R_p current source is connected. In addition, it will detect if R_a is present on CC1/CC2 pins. Upon detection of plug orientation, pin ID will indicate if PTN5150 is working under either host role or device role, and other status will also be reflected in I²C registers.

PTN5150 Block Diagram



View additional information for [CC Logic for USB Type-C Applications](#).

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