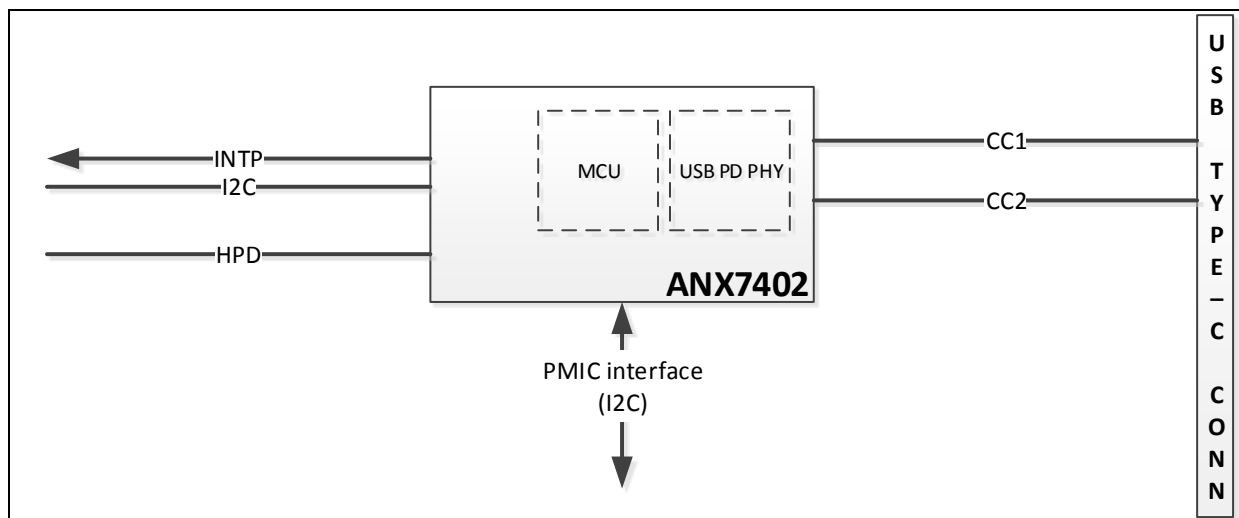# USB Power Delivery PHY with Channel Configuration Control

ANX7402 is a USB Power Delivery (USB-PD) PHY with an integrated microcontroller (MCU). The MCU enables ANX7402 to manage the cable detection, USB Power Delivery negotiations, Vendor Defined Message (VDM) communication protocol, and other functions, as defined in the USB Type-C™ v1.0 and USB Power Delivery v2.0 specifications. ANX7402 supports a Hot Plug Detect (HPD) input pin and converts the HPD signal over the Configuration Channel (CC) to enable DisplayPort™ (DP) Alt Mode applications. When paired with a DP-to-HDMI/VGA bridge (such as the ANX7737/9837) and a USB Billboard device IC, the ANX7402 creates an ideal solution for USB Type-C (USB-C™) dongle and docking station applications.

Features

- Embedded MCU to implement cable detection and USB-PD messaging for charging related functions
- 5V-tolerant CC/VCONN signals
- Dead battery charging support
- I2C slave mode to support external MCU/IC
- I2C master and GPIOs to control external switch, Power Management Integrated Circuits (PMICs) or USB charger IC based on the USB-PD configuration

- 3.3V power supply (1.0V Core power generated by internal regulator)
- Supports the following
  - USB Power Delivery Specification v2.0 on CC wire
  - HPD input pin and conversion over CC for DP Alt Mode applications
- Compliant with the following
  - USB Type-C Cable and Connector Specification (rev 1.0)
  - USB Power Delivery Specification v2.0 (rev 1.0)

Related Products

Part Number	Description
ANX7802	SlimPort Transmitter (HD, 1080p30) with HDMI input
ANX7805	SlimPort Transmitter (Full-HD, 1080p60) with RGB-24, MIPI-DSI, SPDIF, I²S and SLIMbus inputs
ANX7812	SlimPort Transmitter (Full-HD, 1080p60) with HDMI input
ANX7814	SlimPort Transmitter (Full-HD, 1080p60) with HDMI input
ANX7816	SlimPort Transmitter (Ultra-HD, 4Kp60) with HDMI input
ANX7730	SlimPort to HDMI (Full-HD, 1080p60 and 3D) converter
ANX7732	SlimPort to VGA (WUXGA, 1920x1080p60) converter
ANX7748	SlimPort to DisplayPort (WUXGA, 1920x1080p60) active lane converter

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