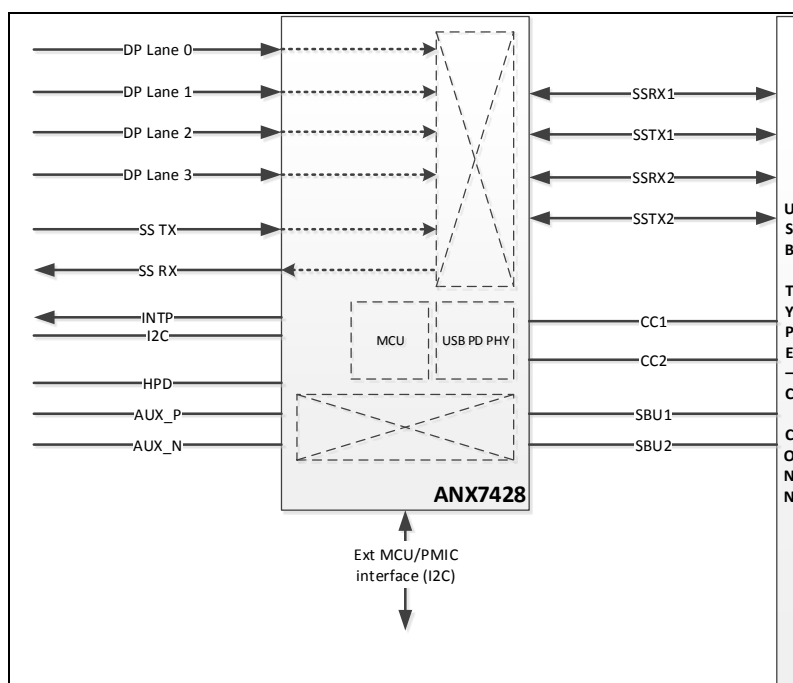


USB Type-C Crosspoint Switch

ANX7428 is an intelligent crosspoint switch that supports switching at data rates of up to 6.75Gbps. ANX7428 supports high-speed interfaces, such as USB 3.1 (Gen 1 – 5Gbps) and DisplayPort™ (DP) 1.3 at up to HBR2.5 (6.75Gbps). ANX7428 is designed as a companion IC to various CPUs and Application Processors (APs) to enable notebook PCs, tablets, and smartphones to use mobile connectors such as the reversible USB Type-C. An integrated microcontroller (MCU) is available to manage the signal switching, Channel Configuration (CC) detection, USB Power Delivery (USB-PD) charging and Vendor Defined Message (VDM) protocol, and other functions, as defined in the USB Type-C v1.0 and USB Power Delivery v2.0 specifications. ANX7428 can be configured for a Downstream Facing Port (DFP), Upstream Facing Port (UFP), or Dual-Role Port (DRP) to support a USB Type-C receptacle. In the DFP configuration, ANX7428 supports the DisplayPort Alternate Mode as defined by VESA® to carry high-definition audio and video (A/V) contents at 1, 2, or 4-lanes DP over the USB Type-C connector.

Features

- High-speed switching up to 6.75Gbps
- 4-lanes DisplayPort inputs with link speed of 1.62Gbps, 2.7Gbps, 5.4Gbps, and 6.75Gbps
- USB 3.1 signal (SSTX and SSRX) with Gen1 (5Gbps) link speed
- DisplayPort Alternate Mode communication support through USB-PD structured VDM messaging
- Embedded MCU to implement signal switching, USB-PD messaging, and DisplayPort 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 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 3.1 signal switching
 - DisplayPort Alternate Mode on USB Type-C Standard (rev 1.0) Pin Assignments C, D, E and F
 - USB Power Delivery Specification v2.0 on CC wire
- Compliant with the following
 - DisplayPort 1.3 PHY and electrical specifications
 - USB Type-C Cable and Connector Specification (rev 1.0)
 - USB Power Delivery Specification v2.0 (rev 1.0)
 - USB 3.1 Gen 1 electrical specifications



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, I ² S 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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