

## USB Type-C™ Power Delivery v3.0 Controller with De-Mux (USB/DP)

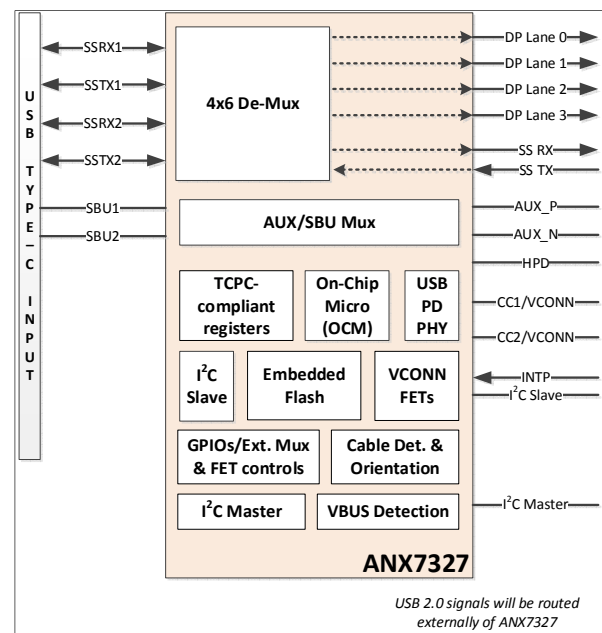
ANX7327 is a USB-PD v3.0 port controller with an integrated de-mux that supports switching at data rates of up to 10Gbps. ANX7327 supports high-speed interfaces, such as USB 3.1 (Gen 1 – 5Gbps, Gen 2 – 10Gbps) and DisplayPort™ (DP) 1.4 at up to HBR3 (8.1Gbps). ANX7327 is designed to be placed behind a USB Type-C (USB-C™) receptacle of a USB-C accessory or HDTV or monitor USB-C port. The USB-C port with the embedded IC device behind it enables a passive USB-C cable connectivity between any USB-C source and the accessory or HDTV or monitor to further the USB-C functions to a display or data connectivity downstream. On the source side, when paired with a re-timer mux such as the ANX7440, the ANX7327/7440 combo solution can enable a USB-C full function port with CPUs that have integrated USB-C mux. An On-chip Microcontroller (OCM) 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 v1.2 and USB Power Delivery v3.0 specifications. ANX7327 can be configured for an Upstream Facing Port (UFP) to support a USB-C receptacle. When paired with a DP-to-HDMI/VGA bridge (such as the ANX7737/9837), the ANX7327 creates an ideal solution for USB Type-C dongle, docking, HDTV, and monitor applications.

### Features

- High-speed de-mux (4x6) switching up to 10Gbps
- 4-lanes DisplayPort outputs with link speed of 1.62Gbps, 2.7Gbps, 5.4Gbps, 6.75Gbps, and 8.1Gbps
- USB 3.1 signal output (SSTX and SSRX) with Gen1 (5Gbps) and Gen2 (10Gbps) link speed
- USB 1.1 Billboard support
- DisplayPort Alternate Mode (SlimPort®) communication support through USB-PD structured VDM messaging
- Native TCPC-compliant hardware register interface
- Integrated VCONN FETs
- Built-in 10-bit ADC to monitor VBUS voltage and current
- Dedicated control signals for VBUS Source FET, VBUS sink FET, and VBUS auto discharge circuitry
- Serial and debug interfaces
  - Slave interface
- Industry standard compatibility
  - USB Type-C r1.2 specification
  - USB Power Delivery v3.0 r1.0 specification
  - DisplayPort 1.4 specification
  - DisplayPort Alternate Mode over USB Type-C r1.1 specification
  - Universal Serial Bus (USB) Type-C Port Controller Interface r1.0 specification
- Low-power design
  - Single supply at 3.3V
  - Dedicated supply power pin for flexible I/O power – 1.8V or 3.3V
  - Ultra-low power consumption (typical 80uW) in standby mode
- On-chip Microcontroller (OCM) to implement signal switching, USB-PD messaging, and DisplayPort related functions
  - 64K bytes SRAM for firmware execution
  - 128K bytes Flash for firmware storage
  - PDFU function for firmware updating
- Dead battery detection support
- Package offered: 48-pin QFN, 6mm x 6mm, 0.90mm Z-height, pin-pitch: 0.4mm

### Applications

USB Type-C dongle, docking, HDTV, monitor



## Related Products

Part Number	Description
ANX7412	USB Power Delivery (USB-PD) v3.0 port controller for Sink-side
ANX7411	USB Power Delivery (USB-PD) v3.0 port controller for Source-side
ANX7447	USB Power Delivery (USB-PD) v3.0 port controller with integrated USB/DP mux (6x4)

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