

## USB Type-C™ Crosspoint Switch with On-chip Microcontroller

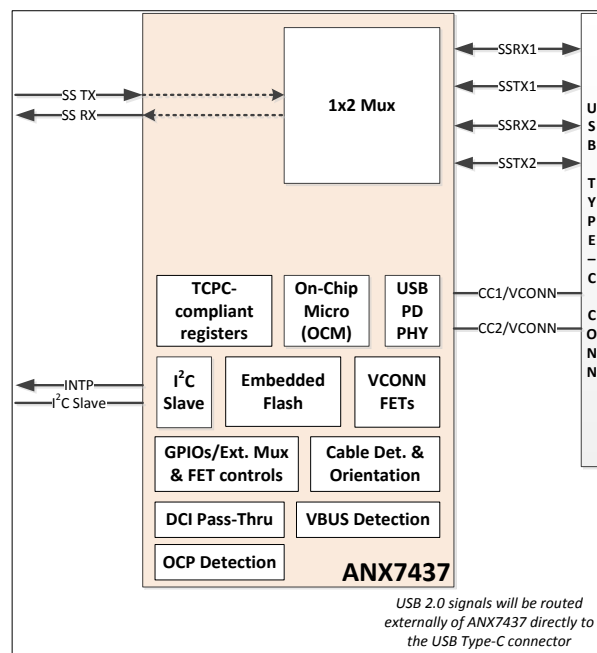
ANX7437 is an intelligent crosspoint switch that supports switching at data rates of up to 10Gbps. ANX7437 supports high-speed interfaces, such as USB 3.1 (Gen 1 – 5Gbps, Gen 2 – 10Gbps). ANX7437 is designed as a companion IC to various CPUs and Application Processors (APs) to enable notebooks, desktops, and 2-in-1 PCs to use the reversible USB Type-C (USB-C™) connectors. 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. ANX7437 can be configured for a Downstream Facing Port (DFP) or Dual-Role Port (DRP) to support a USB-C receptacle.

### Features

- USB 3.1 signal (SSTX and SSRX) with Gen1 (5Gbps) and Gen2 (10Gbps) link speed
- Native TCPC-compliant hardware register interface
- Supports DFP and DRP modes for Host-only or Dual-Role applications
- 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
  - Direct Connect Interface (DCI) debug support
- Industry standard compatibility
  - USB Type-C r1.2 specification
  - USB Power Delivery v3.0 r1.0 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 and USB-PD messaging
  - 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, 0.8mm Z-height, pin-pitch: 0.4mm

### Applications

Notebooks, desktops, and 2-in-1 PCs



## 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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