

## 10G Active Redriver with Linear Equalization for USB3.2/DisplayPort™

ANX7493-AA is a 4-lane redriver capable of switching DisplayPort (DP) and USB3.2 Gen 2x2 10Gbps signals to support a single Type-C™ (USB-C™) port with DisplayPort Alternate Mode. ANX7493-AA can be also configured to a DisplayPort (DP)2.0 Redriver which supports up to 4-lane UHBR10. It is backward compatible with DP 1.4a and USB3.2 Gen 2x2 and Gen 2x1 protocols. Each lane in the ANX7493-AA Redriver has a maximum signal speed of 10Gbps. Two lanes can be bonded to increase the total link bandwidth to 20Gbps. Work modes are set via I2C registers. ANX7493-AA has built-in redriver to recover both the USB and DP signals with loss compensation of 12dB for USB and DP. ANX7493-AA supports a high-gain bandwidth linear amplifier with Continuous Time Linear Equalization (CTLE). ANX7493-AA integrates the AUX snooping for detecting DP states.

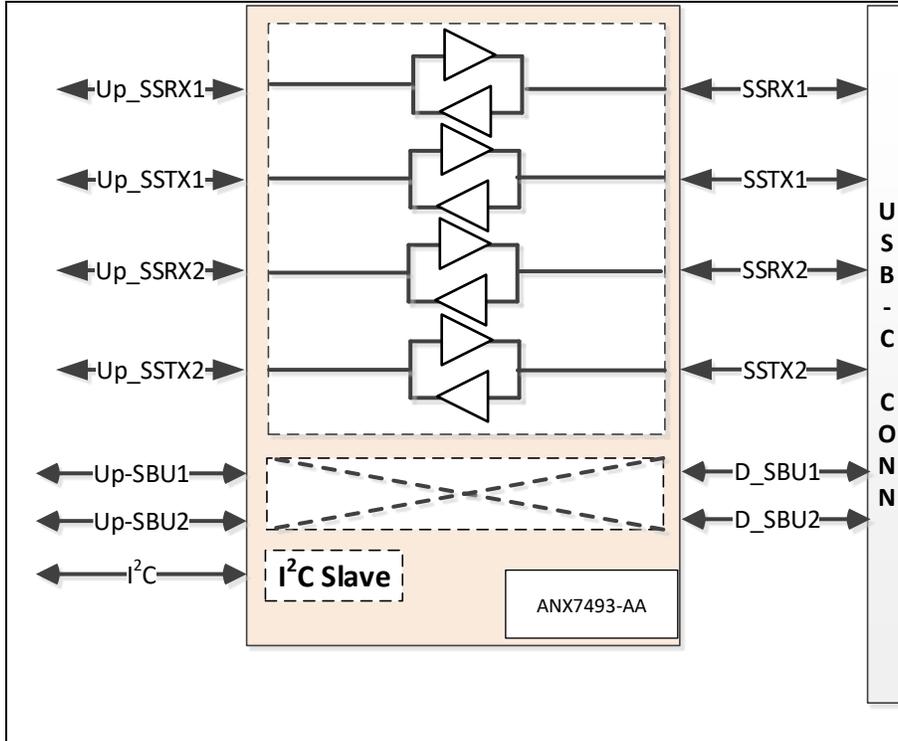
### Features

- Built-in redrivers
  - Integrated re-driver for USB3.2 up to Gen 2 @ 10Gbps
  - Integrated re-drivers for DisplayPort up to UHBR10 @ 10Gbps.
  - Supports both host (source) and device (sink) applications in USB-C subsystems with DisplayPort Alternate Mode
  - Loss compensation to recover up to 12dB channel loss
- Work mode and CTLE configurations
  - Work mode set by I2C registers
  - Datapath orientation and direction set by I2C registers or GPIO
  - CTLE configurations set by I2C registers or GPIO
- Serial and debug interfaces
  - I2C Slave interface, up to 1MHz, for mux and redriver configuration
- Industry standard compatibility
  - USB3.2 specification
  - DisplayPort 2.0 specification
  - USB Type-C r2.0 specification
- Low-power design
  - AUX CH commands snooping for power saving in DP mode
  - USB high speed and LFPS signals detection for power saving in USB mode
  - Analog power supply at 1.8V
  - I/O power supply at 1.8V – Integrated Core power supply at 1.2V
- Package
  - QFN-50, 4.7mm x 6.4mm, 0.90mm Z-height, 0.35mm pin-pitch
- Commercial temperature range of 0C to 70C

## Applications

Notebooks, desktops, gaming PCs, workstations, servers,

2-in-1 PCs, active cables and accessories



## Related Products

| Part Number | Description  |
|-------------|--|
| ANX7451     | 10G Active Mux (4x4) with Integrated Re-timers for USB3.2/DisplayPort      |
| ANX7431     | USB3.2 (10G) 1x2 Active Switch USB-C Re-timer                              |
| ANX7433     | 10G Active Mux (1x2) with Integrated Re-timer and CC Detection for USB 3.2 |
| ANX7443     | 10G Active Mux (6x4) with Integrated Re-timers for USB3.2/DisplayPort      |
| ANX7491     | 10G USB 3.2 Re-timer (1-Port)  |
| ANX7497     | DisplayPort 4-lane Re-timer  |

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