Preliminary
RD1011
Product Brief

Bidirectional Active USB-C™ Cable for USB3.2 (10G) and DP1.3 (8.1G)

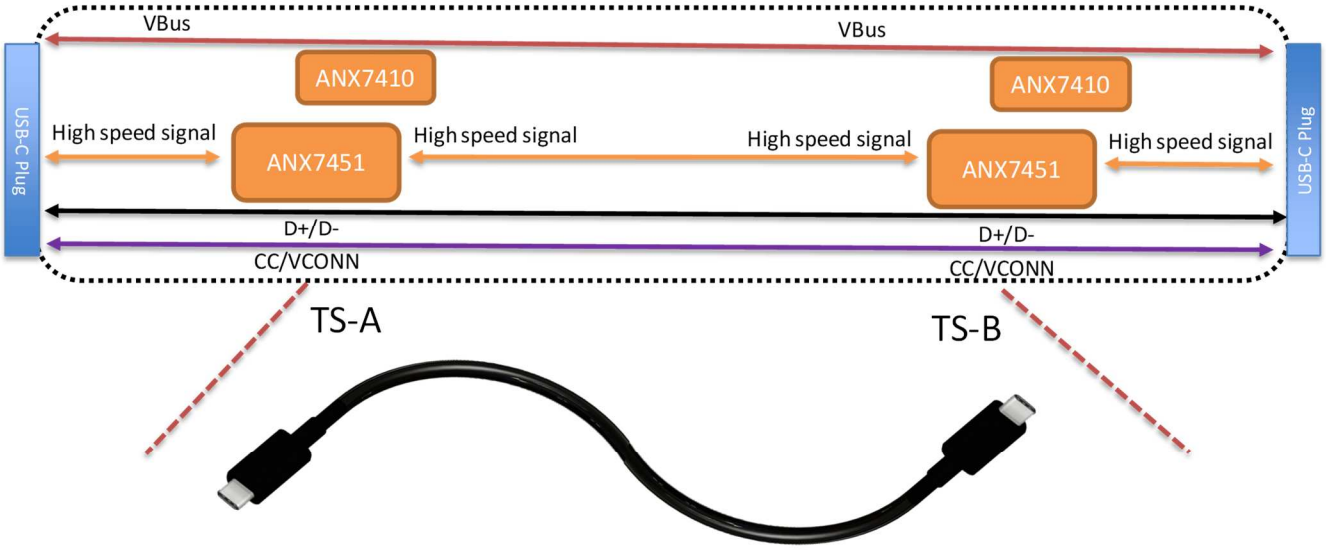
RD1011 is a bidirectional active USB Type-C™ (USB-C) cable, which includes two paddle cards, each with an ANX7451 device on it. The ANX7451 is a 4x4 re-timing mux capable of switching DisplayPort (DP) and USB3.2 Gen 2 10Gbps signals to support a single USB Type-C™ (USB-C™) port. The RD1011 design can recover both the USB and DP signals with loss compensation of up to 23dB and 27dB respectively. The RD1011 includes two ANX7410 devices, which act as an on-board programmable MCU and eMarker chip. With ANX7410, ANX7451 can be initiated with optimal settings that enable the RD1011 design to cover 4-meter at 28AWG cable length. RD1011 can be used with any USB-C port on any of the display monitors, docking stations and VR HMDs.

Features

- Bidirectional active USB-C cable carrying 4L DP or 2L DP and USB3.2
  - Supports up to 4L of DisplayPort in/out, with signal conditioning up to 8.1Gbps (supports HBR3, HBR2, HBR, RBR rates)
  - Supports USB3.1 in/out, with signal conditioning up to 10Gbps
  - Supports USB2.0 (480Mbps)
  - Compensates signal loss of up to 27dB
- Supports plug flip
- Powered by VCONN and VBUS
- On-board programmable MCU, ANX7410, to initiate ANX7451 with specific settings
- ANX7410 acts as an eMarker chip to snoop or respond SOP' and SOP'' messages from a USB-C DFP, as per active USB-C cable spec
- Two paddle cards (2x re-timers) design to guarantee data throughput performance, and for ease of production

Applications

Monitors, Docking Stations, VR/AR HMDs



Related Products

Part Number	Description
ANX7410	USB-PD and Microprogrammed Control Unit (MCU)
ANX7451	10G Active Mux (4x4) with Integrated Re-timers for USB3.2/DisplayPort1.4a
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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