

LT7211D --- Product Brief

Type-C/DP/eDP to Dual-port LVDS with Audio

Features

● Type-C

- Compliant with VESA DisplayPort Alt Mode on USB Type-C Standard version 1.0
- Compliant with USB Power Delivery Rev. 2.0
- Compatible with USB Type-C V1.1
- Built-in CC controller for plug and orientation detection
- Dual-port CC for charger and normal communication

● DP/eDP Receiver

- Compliant with DisplayPort Specification 1.2 for 1.62Gbps, 2.7Gbps, 5.4Gbps
- Compliant with DisplayPort Specification version 1.2 and Embedded DisplayPort (eDP) Specification version 1.4
- Support DisplayPort 1, 2, 4 lanes
- Support HDCP 1.3
- Support eDP Authentication: Alternative Scramble Seed Reset and Alternative Framing
- Fast and full Link Training for embedded DisplayPort system
- Adaptive DisplayPort Receiver Equalization for PCB, cable and connector losses
- Support AUX and IIC for firmware updating

● Single/Dual-Port LVDS Transmitter

- Compatible with VESA and JEIDA standard
- 1/2 Configurable Port
- 1 clock lane and 4 configurable data lanes per port
- Data Lane and Polarity Swapping
- Support Maximum Data Rate 1.2Gb/s/lane
- Output Color Depth supports 6-bit and 8-bit
- Video stream copy mode for each dual-port
- Side-by-side 3D support

● Miscellaneous

- 3.3V/1.2V Supply Power
- Internal CSC support conversions between YCbCr 4:4:4 and RGB, and between YCbCr 4:2:2 and YCbCr 4:4:4
- Support SPDIF and 2-channel IIS audio output
- Support 100KHz and 400KHz I2C slave
- Power from phone or adapter mode selection
- Integrated Microprocessor
- Embedded EDID shadow
- Temperature Range: -40°C ~ +85°C
- ESD 4kV HBM

Description

The LT7211D is a high performance DP1.2 to LVDS chip for VR/Display application.

For DP1.2 input, LT7211D can be configured as 1,2,4 lane, also support lane swap function. Adaptive equalization makes it suitable for long cable application and the maximum bandwidth is up to 21.6Gbps

For LVDS output, LT7211D can be configured as single-port or dual-port. For 2D video stream, the same video stream can be mapped to two separated panel, for 3D video format, left side data can be sent to one panel, and right side data can be sent to another panel.

With sophisticated MCU and the Embedded Flash, LT7211D support EDID buffer, DP/eDP input detection and determine to enter into power saving mode automatically. When the receiver of LT7211D locks the input signal, MCU can read the recovered timing parameters by MSA registers to match the ASSR. The DPCD registers are accessible via system I2C when debugging the full link training. Once the fast link training used, system time will save at least 400ms.

Applications

- Docking Station
- Dongle
- VR

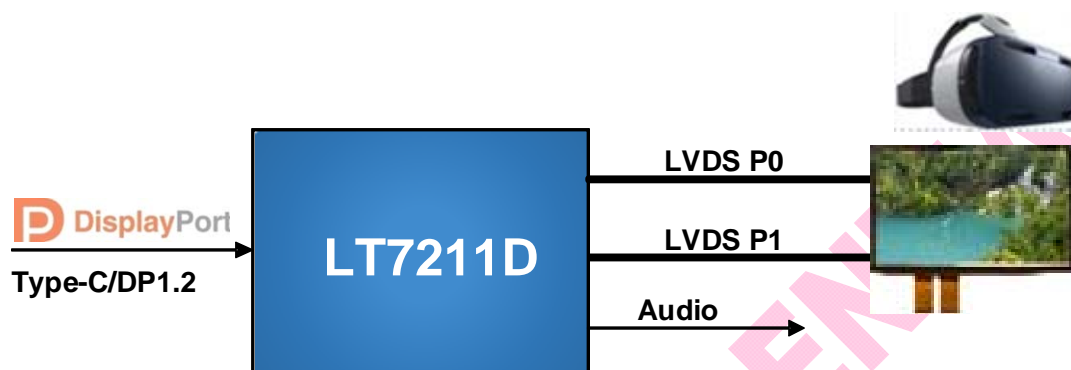


Figure1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT7211D	-40°C to+85°C	QFN64 (7.5*7.5)	Tray

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