LONTIUM SEMICONDUCTOR

LT7211UX --- Product Brief

Type-C/DP to Quad-port LVDS with Audio

Features

- **USB Type-C**
  - Compliant with VESA DisplayPort Alt Mode on USB Type-C standard V1.0
  - Compliant with USB Power Delivery specification R3.0, V1.0
  - Compliant with USB Type-C Cable and Connector specification R1.3
  - Built-in dual CC controllers for charger and normal communication
  - 3 data roles supported: DFP, UFP and DRP
  - 2 power roles supported: source and sink

- **DP1.4 Receiver**
  - Compliant with the DP1.4 specification with data rates up to 8.1Gbps per channel
  - Support HDCP 1.3/2.2/2.3
  - Support HDR
  - Support FEC
  - Support 8k@30Hz, 8k@60Hz with DSC

- **Single/Dual/Quad-Port LVDS Transmitter**
  - Compatible with VESA and JEIDA standard
  - 1/2/4 configurable ports
  - 1 clock lane and 3/4/5 configurable data lanes per port
  - 1.2Gbps per data lane
  - Programmable transmitter swing
  - Support lane swap and polarity inversion
  - Support RGB/YUV 6/8/10-bit Video Format
  - 3D support: direct 3D output, 2-way 2D L/R output

- **Miscellaneous**
  - 3.3V/1.1V Supply Power
  - VESA DSC v1.2a (v1.1 compatible)

- Zoom scaling up and down
- CSC: RGB <-> YUV444 <-> YUV422<-> YUV420
- Support SPDIF and 8-channel IIS audio output
- Support 100KHz and 400KHz I2C slave
- Power from phone or adapter mode selection
- Integrated Microprocessor
- Temperature Range: -40°C ~ +85°C
- ESD 4kV HBM

Description

The LT7211UX is a high performance Type-C/DP1.4 to LVDS chip for AR/VR/Display application.

HDCP RX as the upstream of HDCP repeater, can cooperate with HDCP TX of other chips to realize the repeater function.

For DP1.4 input, LT7211UX 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 32.4Gbps.

For LVDS output, LT7211UX can be configured as single, dual or quad-port LVDS with 1 high-speed clock lane, and 3~5 high-speed data lanes operating at maximum 1.2Gbps/lane, which can support a total bandwidth of up to 24Gbps.

LT7211UX internally integrates an 8-bit OCM and SPI flash memory (stacked die) to run program. Online software upgrade is also supported for LT7211UX.

LT7211UX is fabricated in advanced CMOS process and implemented in 9mmx9mm BGA169 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

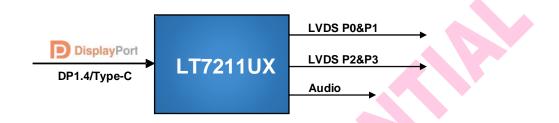# Applications

- Mobile system
- AR/VR
- Display

Figure1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT7211UX	-40℃ to +85℃	BGA169 (9*9)	Tray

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