

LT7911UX --- Product Brief

Type-C/DP to Quad-port MIPI 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 MIPI® DSI/CSI Transmitter

- Compliant with D-PHY1.2 & DSI 1.3 & CSI-2 1.3 , C-PHY1.0 & DSI-2 1.0 & CSI-2 2.0
- 1/2/4 configurable port
- D-PHY: 1~4 Configurable Data Lanes per port
- C-PHY: 1~3 Configurable Data Lanes per port
- D-PHY: 2.5Gb/s per data lane
- C-PHY: 5.7Gb/s per data lane
- Data lane and polarity swapping
- Support video overlap
- Support RGB/YUV4:2:2/YUV4:4:4/YUV 4:2:0 8/10bit Video Format
- Video stream copy mode for each single/dual-port
- Side-by-side 3D support
- Support CSI D-option 8 Lane output

- Port swap

● LPDDR 3/4 Controller

- Compliant with JESD209-3C and JESD209-4
- Band Width up to 2133Mbps
- Support X16 SDRAM Organization
- Programmable CAS Latency
- BL8 Supported Only
- Programmable Output Driver Impedance
- Support ZQ Calibration
- Byte and Lane Swappable

● 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
- Embedded EDID shadow.
- Temperature Range: -40°C ~ +85°C
- ESD 4kV HBM
- Embedded LPDDR3/4 DRAM, Packaged in BGA169 8mm x 8mm

Description

The LT7911UX is a high performance Type-C/DP1.4 to MIPI chip for VR/Display application.

For DP1.4 input, LT7911UX 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 MIPI output, LT7911UX features configurable single-port or dual-port or quad-port MIPI®DSI/CSI with 1 high-speed clock lane and 1~4 high-speed data lanes

operating at maximum 2.5Gb/s/lane with D-PHY, which can support a total bandwidth of up to 40Gbps. Or support 5.7Gb/s/lane with C-PHY, which can support a total bandwidth of up to 68.4Gbps.

LT7911UX internally integrates an 8-bit OCM and SPI flash memory (stacked die) to run program. Online

software upgrade is also supported for LT7911UX.

LT7911UX is fabricated in advanced CMOS process and implemented in 8mmx8mm BGA169 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

Applications

- Mobile system
- Display
- VR



Figure1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT7911UX	-40°C to+85°C	BGA169 (8*8)	Tray

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