

# LT8711UX --- Product Brief

## Type-C/DP1.2 to HDMI2.0 Converter with USB3.0 Switch

### Features

#### ● USB Type-C

- Compliant with VESA DisplayPort Alt Mode on USB Type-C Standard V1.0
- Compliant with USB Power Delivery Specification R2.0, V1.0
- Compatible with USB Type-C Cable and Connector Specification R1.2
- Built-in CC controller for plug and orientation detection
- Dual CC ports for charger and normal communication
- Flexible USB Type-C switching for USB3.0 5Gbps and DisplayPort Alt Mode up to 5.4Gbps
- Compliant with HDMI 1.4b Alt Mode on USB Type-C Specification V1.0

#### ● DP1.2 Receiver

- Compliant with VESA DP1.2
- Support 1.62/2.7/5.4Gbps
- Support 1/2/4 lanes
- Support SSC
- 1Mbps AUX channel
- Compliant with HDCP1.3
- Adaptive receiver equalization for PCB, cable and connector losses
- Support lane swap(arbitrarily) and polarity inversion(independent)
- Receiver PHY is HDMI signal compatible

#### ● HDMI2.0 Transmitter

- Compliant with HDMI2.0, HDMI1.4 and DVI1.0
- Compliant with HDCP2.2 HDCP1.4
- Data rate up to 6Gbps
- Support UHD 4k@60Hz(RGB and YCbCr 4:4:4)
- Support TMDS scrambling for EMI/RFI reduction
- Support SCDC(Status and Control Data Channel)
- Support CEC

- AC-couple capable
- Support channel swap(arbitrarily) and polarity inversion(independent)
- Programmable transmitter swing and pre-emphasis
- Downstream receiver sensing
- 5V tolerance DDC/HPD I/Os

#### ● Digital Audio Outputs

- I2S and SPDIF interface(SPDIF shared with SD0)
- 8-channel LPCM or compressed audio
- Sample rate up to 192kHz

#### ● Miscellaneous

- DP receiver to HDMI transmitter bypass to support HDMI Alt Mode
- Internal or external oscillator
- Integrated microprocessor
- Embedded SPI flash for firmware and HDCP keys
- GPIOs for VBUS/VCONN/AUX and other system control
- Integrated 100/400kHz I2C slave
- Firmware update through SPI, AUX or I2C interface
- Low power consumption
- Optional automatic power down
- Power supply: 3.3V for I/O and 1.2V for core
- ESD 4kV HBM
- Temperature Range: -40 ~ +85
- 88-pin QFN 10\*10 package

### Description

The LT8711UX is a high performance Type-C/DP1.2 to HDMI2.0 converter, designed to connect a USB Type-C source or a DP1.2 source to an HDMI2.0 sink.

The LT8711UX integrates a DP1.2 compliant receiver, and an HDMI2.0 compliant transmitter. Also, two CC controllers are included for CC communication to implement DP Alt Mode and power delivery function, one



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