

LT8711EH-C --- Product Brief

Type-C/DP1.2 to HDMI2.0 Converter

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 dual CC controllers for charger and normal communication
- 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 and 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)
- 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

● 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 controls
- Integrated 100/400kHz I2C slave
- Firmware update through SPI, AUX or I2C interface
- Low power consumption
- Power supply: 3.3V for I/O and 1.2V for core
- ESD 4kV HBM
- Temperature Range: -40°C ~ +85°C
- 64-pin QFN 7.5*7.5 package

Description

The LT8711EH-C 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 LT8711EH-C 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 for upstream Type-C port and another for downstream port.

The device is capable of automatic operation which is enabled by an integrated microprocessor that uses an embedded SPI flash for firmware storage. System control is also available through the use of a dedicated configuration I2C slave interface.

Applications

● Docking Station

● Dongle



Figure 1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT8711EH-C	-40°C to +85°C	QFN64 (7.5*7.5)	Tray
LT8711EH-CI	-40°C to +85°C	QFN64 (7.5*7.5)	Tray

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