

LT8711EX-B --- Product Brief

Type-C/DP1.2 to VGA 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
- **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)
- **Triple-Channel Video DAC**
 - Compliant with VESA VSIS1.2
 - 200MSPS throughput and WUXGA timing support
 - Support CSC(Color Space Conversion) between RGB and YCbCr 4:4:4, YCbCr 4:4:4 and YCbCr 4:2:2
 - Amplitude calibration
 - YPbPr output capable
 - R/B swappable
 - Support separate SYNC or embedded SYNC (SOG/SOY)
 - Load sensing
 - 5V tolerance DDC I/Os
- **Digital Audio Outputs**
 - I2S and SPDIF interface(SPDIF shared with SD0)

- I2S: 2-channel LPCM
 - SPDIF: up to 8-channel LPCM or compressed audio
 - Sample rate up to 192kHz
- **Miscellaneous**
 - 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
 - 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 LT8711EX-B is a high performance Type-C/DP1.2 to VGA converter, designed to connect a USB Type-C source or a DP1.2 source to a VGA sink.

The LT8711EX-B integrates a DP1.2 compliant receiver, and a high-speed triple-channel video DAC. 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.

Two digital audio output interfaces are available, I2S and SPDIF. The I2S interface supports 2-ch LPCM and the SPDIF interface supports 8-ch LPCM or compressed audio, both at maximum 192kHz sample rate.

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

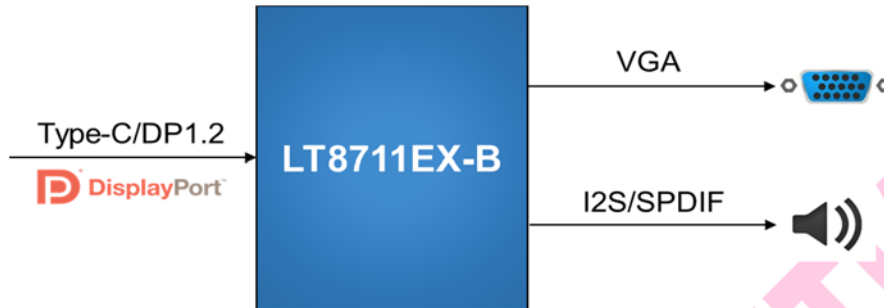


Figure 1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT8711EX-B	-40°C to +85°C	QFN64 (7.5*7.5)	Tray
LT8711EX-BI	-40°C to +85°C	QFN64 (7.5*7.5)	Tray

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