

LT6711 --- Product Brief

HDMI2.0 to DP1.2 with Type-C

1. Features

● HDMI2.0 Receiver

- Compliant to HDMI2.0 Standard
- Support HDCP1.4/2.2
- Support Resolution up to 4Kx2K@60Hz
- Support 8-bit color depth
- Support Status and Control Data Channel (SCDC)
- Support 8 sound channels

● DP1.2 /eDP1.4 Transmitter

- Compliant to VESA DP1.2 Standard
- Support Four Lanes with 1.62Gbps (RBR), 2.7Gbps (HBR) or 5.4Gbps (HBR2) Data Rate
- Support Resolution up to 4Kx2K@60Hz
- Support HDCP1.3 Encryption
- Support 8-bit Color Depth
- Support Hot-Plug Detect
- Optional SSC 0.5% Down-Spreading Output
- Internal Rterm Calibration
- Support Backlight Control for eDP
- Support ASSR for eDP
- Build-in Pattern Generation

● Full-Featured USB Type-C

- Compatible with USB3.1 Gen1, USB Type-C R1.2, DP Alt Mode V1.0 and USB PD R3.0
- Roles Supported: DFP and UFP for DCC, UFP for UCC
- Power Roles Supported: SRC, SNK and DRP for DCC, SNK for UCC
- Bi-directional Active Switch for USB3.1 Gen1 SS Channel
- USB Type-C Full-Featured, Orientation and Role Detection
- 3-level Current Ability Advertise (Host Mode) or Detection

(Device Mode) for Type-C Power: USB Default, 1.5A@5V, 3A@5V

- Support FR_Swap
- SBU Data Path Control for DP Alt Mode
- Dead Battery Support When No Power Applied
- Support Standby Mode for Low-Power Operating

● Miscellaneous

- Support OSD display with 8K Programmable Dot Matrix and Attribute Table
- 1.2V/1.8V/3.3V Supply Power
- External 27MHz Crystal Reference Clock
- Temperature Range: -40°C to +85°C
- Packaged in BGA81 5mmx5mm, 7.5mmx7.5mm QFN64
- Power Consumption: 1W@4K60Hz

2. General Description

The Lontium LT6711 is HDMI2.0 to DP1.2 converter with internal Type-C Alternate Mode switch and PD controller.

For HDMI input, LT6711 features a HDMI2.0 receiver with 1 clock lane and 3 data lanes operating at maximum 6Gb/s per data lane and a maximum input bandwidth of 18Gb/s, allowing resolution up to 4Kx2K@60Hz for RGB format. The converter also integrates a DDC controller and supports both HDCP1.4 and HDCP2.2.

For DP1.2 output, it consists of 4 data lanes, supporting RBR (1.62Gbps), HBR (2.7Gbps) and HBR2 (5.4Gbps) link speeds. The build-in optional SSC function reduces EMI effect on EMI-concerned system application.

In order to be adaptable to the latest USB Type-C ecosystem, LT6711 integrates a high performance bi-directional Super-Speed switch controlled by CC logic and PD management unit to relieve mobile system design

complexity and BOM cost. The switch function is compliant with VESA DP Alternate Mode on USB Type-C Standard. +85°C.

3. Applications

The LT6711 is fabricated in advanced CMOS process and implemented in a small outline 5mmx5mm BGA81 (LT6711B) and 7.5mmx7.5mm QFN64 (LT6711A) package. This package is RoHS compliant and specified to operate from -40°C to

- Mobile systems, VR/AR
- Cellular handsets, PAD/Tablets
- Digital video cameras and Digital still cameras

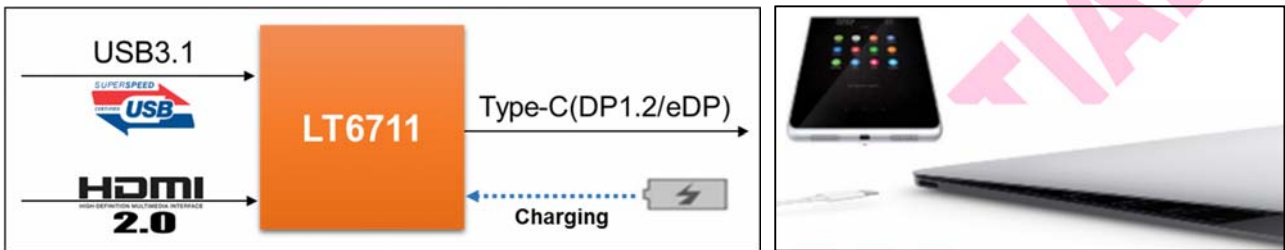


Figure 3.1 LT6711 Typical Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT6711A	-40°C to +85°C	QFN64 (7.5*7.5)	Tray
LT6711B	-40°C to +85°C	BGA81 (5*5)	Tray

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