

# LT6711 --- Product Brief

## HDMI2.0 to DP1.2 with Type-C

### 1. Features

#### ● HDMI2.0 Receiver

- Compliant to HDMI2.0 Standard
- Support HDCP1.4/2.3
- Support Resolution up to 4Kx2K@60Hz
- Support 8-bit color depth
- Support 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

#### ● USB Type-C

- Compatible with 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
- 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 HDCP2.3.

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 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.

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 +85°C.

### 3. Applications

- Mobile systems, VR/AR

- Cellular handsets, PAD/Tablets
- Digital video cameras and Digital still cameras

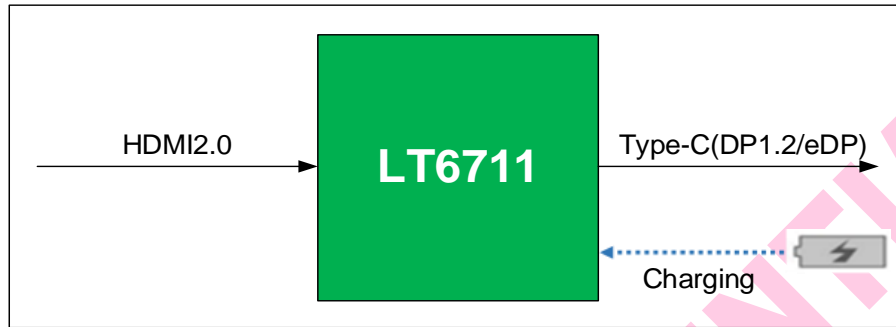


Figure 3.1 Application Diagram

### 4. Ordering Information

Table 4.1 Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method	MPQ
LT6711A	-40°C to +85°C	QFN64 (7.5*7.5)	Tray	2600pcs
LT6711B	-40°C to +85°C	BGA81 (5*5)	Tray	4900pcs

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