

LT8711UXE1 --- Product Brief

Type-C/DP to HDMI2.0 Converter with USB3.1 Gen1 Switch

1. Features

● USB Type-C

- Compliant with VESA DisplayPort alt mode on USB Type-C standard 2.0
- Compliant with USB power delivery specification 3.0
- Compliant with USB Type-C cable and connector specification 1.3
- Built-in dual CC controllers for charger and normal communication
- Support DFP, UFP and DRP data roles
- Support source and sink power roles
- Bi-directional USB3.1 Gen1 SS differential signal passive switch with insertion loss less than 4dB

● DP1.2 Receiver

- Compliant with DisplayPort specification 1.2 for 1.62Gbps, 2.7Gbps, 5.4Gbps
- Compliant Embedded DisplayPort specification version 1.4
- Support DisplayPort 1/2/4 lanes
- Support SSC
- Support HDCP1.3/2.3
- Support 4K@60Hz
- Support HDR10
- Support ASSR for eDP
- Support adaptive EQ

● HDMI2.0 Transmitter

- Compliant with HDMI2.0b, HDMI1.4 and DV11.0
- Data rate up to 6Gbps
- Support HDCP1.4/2.3
- Support HDCP repeater
- Support 4K@60Hz
- Support HDR10
- Support CEC
- Programmable transmitter swing and pre-emphasis

● Miscellaneous

- CSC: RGB <-> YUV444 <-> YUV422<-> YUV420
- Integrated 100K/400KHz I2C slave
- External oscillator 27MHz, +/-50ppm
- Integrated microprocessor
- Embedded SPI flash for firmware and HDCP keys
- Firmware update through SPI/I2C/BB interface
- Power supply: 3.3V for I/O and 1.2V for core

2. General Description

The LT8711UXE1 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 LT8711UXE1 integrates a DP1.2 compliant receiver, and an HDMI2.0 compliant transmitter. Also, two CC controllers are embedded for CC communication to implement DP Alt Mode and power delivery function, one for upstream Type-C port and another for downstream port.

The DP interface comprises 4 main lanes, AUX channel, and HPD signal. The receiver supports maximum 5.4Gbps data rate per lane. The DP receiver incorporates HDCP1.3/2.3 content protection scheme with embedded key for secure transmission of digital audio-video content. The HDMI interface includes 4 TMDS clock/data pairs, DDC, and HPD signal. The HDMI transmitter is capable of supporting up to 6Gbps data rate, quite adequate for handling video resolutions up to UHD 4k 60Hz format. The HDMI transmitter incorporates HDCP engines which support HDCP1.4/2.3. With the inclusion of HDCP, the LT8711UXE1 allows secure transmission of protected content. Embedded key is available that provides the highest level of HDCP key security.

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.

3. Applications

- Docking station
- Dongle

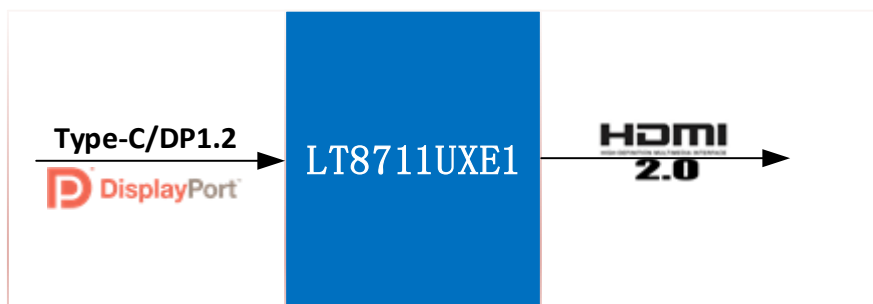
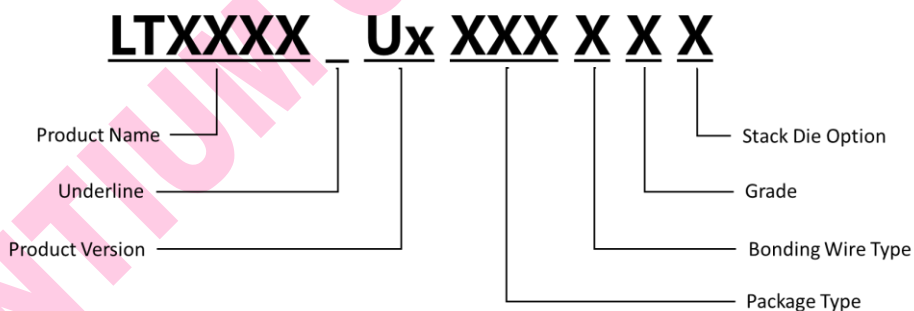


Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT8711UXE1	LT8711UXE1_U3Q02CEM	Preview	QFN88 (10*10)Saw	Cu	E	-40℃ to +85℃	M	Tray	1680pcs



Note: No spaces in the P/N name.

Figure 4.1 Part Number Naming Rules

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