

# LT8711GX --- Product Brief

## Type-C/DP1.4a to HDMI2.1 Converter

### 1. Features

#### ● Type-C

- Compliant with VESA DisplayPort alt mode on USB Type-C standard 1.0
- 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
- Data roles supported: DFP, UFP and DRP
- Power roles supported: source and sink
- Support USB Billboard function

#### ● DP1.4a Receiver

- Compliant with DisplayPort specification 1.4a for 1.62Gbps, 2.7Gbps, 5.4Gbps, 8.1Gbps
- Compliant Embedded DisplayPort specification version 1.4b
- Support DisplayPort 1/2/4 lanes
- Support HDCP 1.3/2.2/2.3
- Support HDCP repeater
- Support 8K@30Hz YUV 4:2:2/YUV 4:2:0
- Support 4K@120Hz YUV 4:2:2/YUV 4:2:0
- Support HDR10
- Support FEC
- Support ASSR for eDP

#### ● HDMI2.1 Transmitter

- Compliant with HDMI2.1, HDMI2.0b, HDMI1.4 and DVI1.0
- Data rate up to 8Gbps
- Support HDCP 1.4/2.2/2.3
- Support HDCP repeater
- Support 8K@30Hz
- Support 4K@120Hz
- Support HDR10
- Support FEC

- Support CEC

#### ● Digital Audio Input or Output

- I2S interface supports up to 8-channel audio, with sample rates of 32~192 KHz and sample sizes of 16~24 bits
- SPDIF interface supports PCM, dolby digital, DTS digital audio at up to 192KHz frame rate
- Compliant with IEC60958 or IEC61937

#### ● Miscellaneous

- Support PD Charge
- VESA DSC v1.2a (v1.1 compatible) support up to 4K@120Hz
- CSC: RGB <-> YUV444 <-> YUV422<-> YUV420
- Integrated 100/400KHz I2C slave
- Integrated microprocessor
- External oscillator 25MHz, +/-100ppm
- Embedded SPI flash for firmware and HDCP keys
- Firmware update through SPI or I2C or USB interface
- Power supply: 3.3V and 1.1V

### 2. General Description

The LT8711GX is a high performance Type-C/DP1.4a to HDMI2.1 converter, designed to connect a USB Type-C source or a DP1.4a source to an HDMI2.1 sink.

The LT8711GX integrates a DP1.4a compliant receiver, and an HDMI2.1 compliant transmitter. Also, one CC controller is included for CC communication to implement DP alt mode and power delivery function, because it is one DRP (Dual Role port).

For DP1.4a input, LT8711GX can be configured as 1/2/4 lanes. Adaptive equalization makes it suitable for long cable application and the maximum bandwidth is up to 32.4Gbps.

For HDMI2.1 output, LT8711GX can be configured as 3/4 lanes. The maximum bandwidth is up to 32Gbps. It allow for the highest resolutions of 8K@30Hz or 8K@60Hz with

compression data.

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 configuration I2C slave interface.

LT8711GX is fabricated in advanced CMOS process and

implemented in 10mmx10mm QFN88 package.

### 3. Applications

- Docking Station
- Dongle

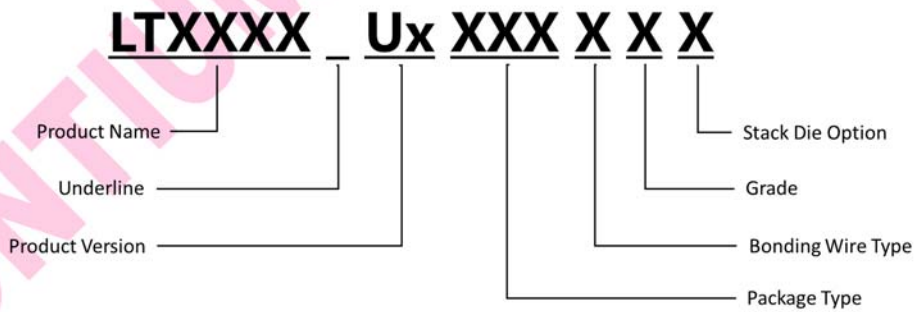


Figure 3.1 Application Diagram

### 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
LT8711GX	LT8711GX_U2Q02AED	Preview	QFN88 (10*10)Saw	Au	E	TBD	D	Tray	1680pcs



Note: No spaces in the P/N name.

Figure 4.1 Part Number Naming Rules

**Copyright © 2021 Lontium Semiconductor Corporation, All rights reserved.**

### **Lontium Semiconductor Proprietary & Confidential**

This document and the information it contains belong to Lontium Semiconductor. Any review, use, dissemination, distribution or copying of this document or its information outside the scope of a signed agreement with Lontium is strictly prohibited.

LONTIUM DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THOSE OF NONINFRINGEMENT, MERCHANTABILITY, TITLE AND FITNESS FOR A PARTICULAR PURPOSE. CUSTOMERS EXPRESSLY ASSUME THEIR OWN RISK IN RELYING ON THIS DOCUMENT.

LONTIUM PRODUCTS ARE NOT DESIGNED OR INTENDED FOR USE IN LIFE SUPPORT APPLIANCES, DEVICES OR SYSTEMS WHERE A MALFUNCTION OF A LONTIUM DEVICE COULD RESULT IN A PERSONAL INJURY OR LOSS OF LIFE.

Lontium assumes no responsibility for any errors in this document, and makes no commitment to update the information contained herein. Lontium reserves the right to change or discontinue this document and the products it describes at any time, without notice. Other than as set forth in a separate, signed, written agreement, Lontium grants the user of this document no right, title or interest in the document, the information it contains or the intellectual property it embodies.

### **Trademarks**

Lontium™ 龙迅™ and ClearEdge™ is a registered trademark of Lontium Semiconductor. All other brand names, product names, trademarks, and registered trademarks contained herein are the property of their respective owners.

**Visit our corporate web page at: [www.lontiumsemi.com](http://www.lontiumsemi.com)**

**Technical support: [support@lontium.com](mailto:support@lontium.com)**

**Sales: [sales@lontium.com](mailto:sales@lontium.com)**