LT8711GX --- Product Brief

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

Features

- **USB Type-C**
  - Compliant with VESA DisplayPort Alt Mode on USB Type-C standard V1.0b
  - Compliant with USB Power Delivery specification R3.0, V1.0
  - Compliant with USB Type-C specification R1.3
  - Built-in CC controller for charger and normal communication
  - CC controller supported: DFP, UFP and DRP
- **DP1.4 Receiver**
  - Compliant with VESA DP1.4 and Embedded DisplayPort (eDP) v1.4
  - Support HDCP 2.2/1.3 decryption
  - 1/2/4 configurable data lane
  - 1.62/2.7/5.4/8.1Gbps per data lane
  - Support SSC
  - 1 Mbps AUX channel
  - Receiver PHY is HDMI signal compatible
  - Adaptive or programmable receiver equalization
  - Support lane swap(arbitrarily) and polarity inversion(independent)
  - Support 8k@30Hz
  - Support eDP Authentication: Alternative Scramble Seed Reset and Alternative Framing
  - Fast and full Link Training for Embedded DisplayPort system
- **HDMI2.1 Transmitter**
  - Compliant with HDMI 2.1/2.0/1.4 and DVI 1.0
  - Support FRL mode with 3, 6 or 8Gbps Data Rate
  - Support 8k@30Hz
  - Support TMDS scrambling for EMI/RFI reduction
  - Support SCDC
  - Support channel swap(arbitrarily) and polarity inversion
  - Programmable transmitter swing and pre-emphasis
  - 5V tolerance DDC/HPD I/Os
- **Miscellaneous**
  - External oscillator
  - Integrated microprocessor
  - Embedded SPI flash for firmware
  - GPIOs for VBUS/VCONN/AUX and other system controls
  - Integrated 100/400kHz I2C slave
  - Firmware update through SPI, I2C or AUX interface
  - Low power consumption
  - Power supply: 3.3V for I/O and 1.1V for core
  - Package：10mmx10mm QFN88

Description

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

The LT8711GX integrates a DP1.4 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.

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.

LT8711GX also support EDID buffer, DP/eDP input detection and determine to enter into power saving mode automatically. When the receiver of LT8711GX locks the input signal, the MCU can read the recovered timing parameters by the MSA registers to match the ASSR. The DPCD registers are accessible via system I2C when debugging the full link training.

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Applications

- Docking Station
- Dongle

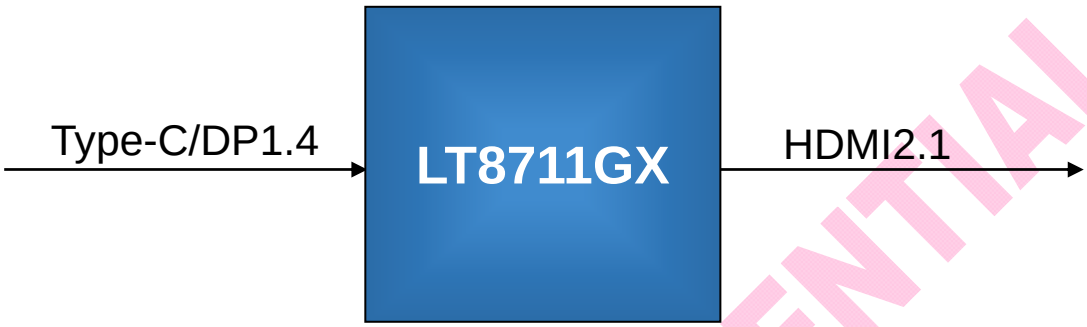

Figure 1. Application Diagram

Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT8711GX	-40℃ to+85℃	QFN88 (10*10)	Tray

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