

LT2611UX --- Product Brief

Quad-Port LVDS to HDMI2.0 with Audio

1. Features

- **Single/Dual/Quad-Port LVDS Receiver**
 - Compatible with VESA and JEIDA standard
 - 1/2/4 configurable ports
 - 1 clock lane and 3/4 configurable data lanes per port
 - 1.2Gbps per data lane
 - Programmable receiver equalization
 - DeSSC capable: +/-5% @30~80kHz
 - 6-bit and 8-bit color depth
 - 3D support: direct 3D input, 2-way 2D L/R input
- **Digital Audio Input**
 - I2S interface supporting 8-channel audio, with sample rates of 32~192 kHz and sample sizes of 16~24 bits
 - SPDIF interface supporting PCM, Dolby Digital, DTS digital audio at up to 192kHz frame rate
 - IEC60958 or IEC61937 compatible
- **HDMI2.0 Transmitter**
 - Compliant with HDMI2.0b, HDMI1.4 and DV11.0
 - Compliant with HDCP2.2 and HDCP1.4
 - Data rate up to 6Gbps
 - On-die back termination
 - Programmable transmitter swing and pre-emphasis
 - Support 4k@60Hz
 - Supported 3D formats:
 - Direct 3D input: frame packing(progressive)
 - 2-way 2D L/R input: side-by-side(half/full), line alternative
 - Supported video formats:
 - CSC disabled: 24-bit RGB
 - CSC enabled: 24-bit YCbCr4:4:4, 16-bit YCbCr4:2:2
- **Miscellaneous**
 - CSC: RGB <-> YUV444 <-> YUV422, support 8-bit only

- Integrated CEC Controller(no command parsing)
- External oscillator
- Integrated microprocessor
- Embedded SPI flash for firmware and HDCP keys
- GPIOs for system controls
- Integrated 100/400kHz I2C slave
- Firmware update through SPI or I2C interface

2. General Description

The LT2611UX is a high performance LVDS to HDMI2.0 converter for STB, DVD applications.

The LVDS input can be configured as single-port, dual-port or quad-port with 1 high-speed clock lane, and 3~4 high-speed data lanes operating at maximum 1.2Gbps/lane, which can support a total bandwidth of up to 19.2Gbps. LT2611UX supports flexible video data mapping path for 2D and 3D applications.

The HDMI2.0 output supports data rate up to 6Gbps which provides sufficient bandwidth for 4k@60Hz video. Also HDCP2.2 is supported for data encryption.

Two digital audio input interfaces are available, I2S and SPDIF. The I2S interface supports 8-ch LPCM and the SPDIF interface supports 2-ch LPCM or compressed audio, both at maximum 192kHz sample rate.

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.

3. Applications

- STB
- DVD/BD
- PTV Box

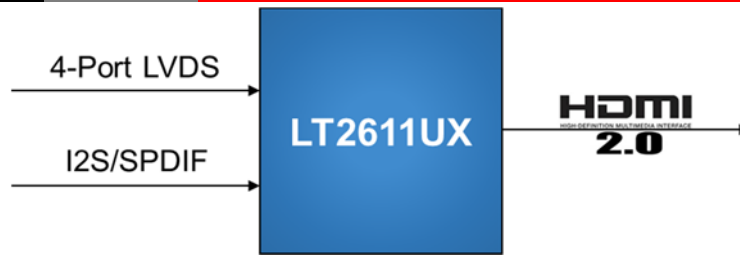


Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Part Number	Product Version	Product Status	Operating Temperature Range	Package	Packing Method	MPQ
LT2611UX	U4	MP	-40°C to +85°C	QFN100 (14*14)	Tray	1190pcs
MP: Mass Production.						

Copyright © 2018-2022 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 in 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

Technical support: support@lontium.com

Sales: sales@lontium.com