LT2611UXD --- Product Brief

Dual-Port LVDS to HDMI2.0 Converter

1. Features

- **Dual-Port LVDS Receiver**
  - Compatible with VESA and JEIDA standard
  - 1~2 configurable port
  - 1 clock lane and 3/4/5 configurable data lanes per port
  - Up to 1.5Gbps per data lane
  - 6/8/10bit color depth
  - Support DE and SYNC mode
  - Support YCbCr4:2:2
  - Internal rterm calibration with less than 5% error
  - Support input De-SSC(30KHz±5%)
  - Support data lane swap and PN swap
  - 3D support: direct 3D input, 2-way 2D L/R input
- **HDMI2.0 Transmitter**
  - Data rate up to 6Gbps
  - Support HDCP 1.4/2.3
  - Support HDCP repeater
  - Support HDR10 and Dolby Vision
  - Support CEC
  - Programmable transmitter swing and pre-emphasis
  - Support lane swap
  - Support PN swap(all lanes controlled simultaneously)
- **Digital Audio Input**
  - I2S interface supports up to 2-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**
  - CSC: RGB <-> YUV444 <-> YUV422

- Integrated 100/400KHz I2C slave
- External oscillator 24MHz, +/-50ppm
- Integrated microprocessor
- Embedded SPI flash for firmware and HDCP keys
- Firmware update through SPI or I2C interface
- Power supply: 3.3V and 1.2V

2. General Description

LT2611UXD is a high performance Dual-Port LVDS to HDMI2.0 converter.

For LVDS input, LT2611UXD can be configured as 2 Ports and 3/4/5 lanes per port. Up to 12dB equalization makes it suitable for long distance application and the maximum bandwidth is up to 15Gbps.

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. HDMI transmitter incorporates HDCP engines which support both HDCP1.4/2.3.

Two digital audio input interfaces are available, I2S or SPDIF. The I2S interface supports 2-ch LPCM and the SPDIF interface supports 2-ch LPCM or compressed audio, both at maximum 192 KHz 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.
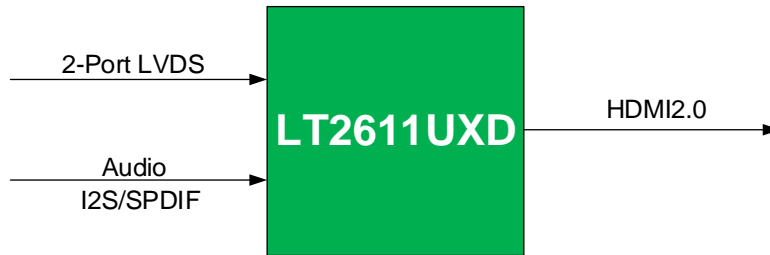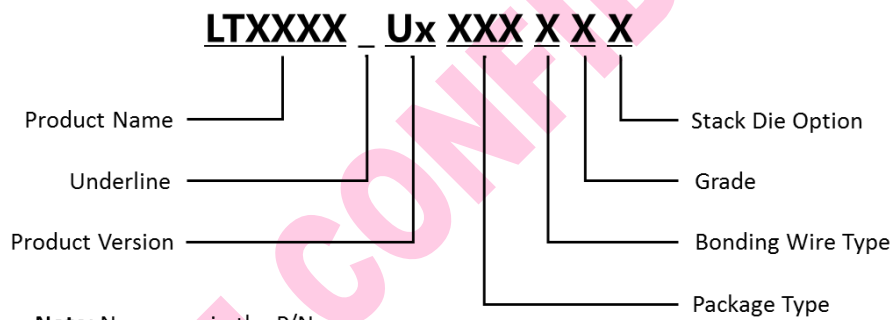
3. Applications

- STB
- DVD/BD
- PTV Box

Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT2611UXD	LT2611UXD_U2Q07CED	MP	QFN64 (7.5*7.5)Saw	Cu	E	−40°C to +85°C	D	Tray	2600pcs

Note: No spaces in the P/N name.

Figure 4.1 Part Number Naming Rules

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