LT9611 --- Product Brief

2-Port MIPI to HDMI1.4 Converter

1. Features

- **Dual-Port MIPI® DSI/CSI Receiver**
  - Compliant with D-PHY1.2 ,DSI1.3/CSI-2 1.00
  - 1~2 Configurable Port
  - 1 Clock Lane and 1~4 Configurable Data Lanes
  - 80Mb/s~2Gb/s per Data Lane
  - Data Port ,Data Lane and Polarity Swapping
  - Internal Rterm Calibration with Less than 5% Error
  - Programmable Equalization
  - Burst Mode and Non-Burst Mode Supported
  - Dual Port Odd-Even Mode and Left-Right Mode Supported
  - Support up to 24-bit   RGB and YUV Data Format
- **HDMI1.4 Transmitter**
  - Compliant with HDMI1.4 and HDCP1.4
  - Resolution Up to 4K 30Hz
  - Programmable output swing and pre-emphasis
  - Integrated CEC controller(no command parsing)
  - 5V tolerance DDC/HPD I/Os
- **Miscellaneous**
  - 1.8V and 3.3V Power Supply
  - Support 100KHz and 400KHz I2C Slave
  - Support up to 8-CH I2S/SPDIF Audio Input
  - Temperature Range: -40°C ~ +85°C

- 64-pin QFN 7.5*7.5 package

2. General Description

The LT9611 MIPI® DSI/CSI to HDMI1.4 Bridge features a dual-port MIPI® D-PHY receiver front-end configuration with 4 data lanes per port operating at 2Gbps per data lane and a maximum input bandwidth of 16Gbps.

The bridge provides a HDMI data output with optional SPDIF or 8-channel I2S serial audio input. Its high fidelity 8-channel I2S can transmit audio up to a 192 kHz sampling rate. The SPDIF can carry stereo LPCM audio or compressed audio, including Dolby® Digital and DTS®. The LT9611 is fabricated in advanced CMOS process and implemented in a small outline 7.5mmx7.5mm QFN64 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

3. Applications

- Mobile systems
- Cellular handsets
- Digital video cameras
- Digital still cameras
- Personal media players
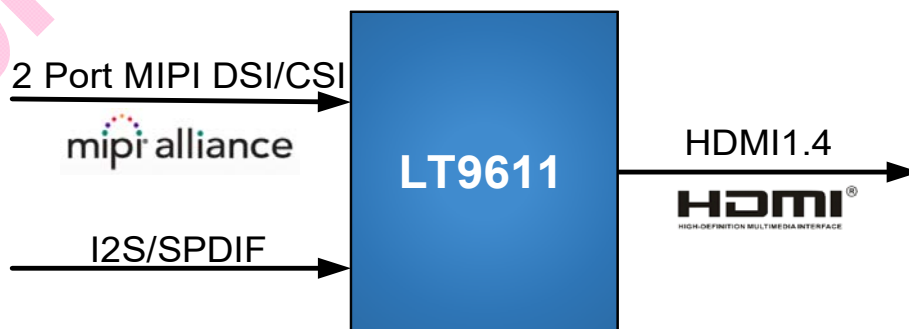- Gaming
- Camera systems

Figure 3.1 LT9611 Typical Application Diagram

4. Ordering Information

Table 4.1. Ordering Information

Part Number	Product Version	Product Status	Operating Temperature Range	Package	Packing Method	MPQ
LT9611	U2	NRND	-40°C to +85°C	QFN64 (7.5*7.5)	Tray	2600pcs
LT9611	U3	MP	-40°C to +85°C	QFN64 (7.5*7.5)	Tray	2600pcs

NRND: Not Recommended for New Designs.
MP: Mass Production.

Table 4.2 Product Version Information

Product Version	Information	Note
U2	U2 is not recommended when the MIPI source has no EOTP packet.	
U3	U3 is recommended when the MIPI source has no EOTP packet.	

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