

LT9211 --- Product Brief

MIPI/TTL/2-Port LVDS to MIPI/TTL/2-Port LVDS Converter

Features

● MIPI Transmitter

- Compliant with DCS1.02, D-PHY1.2, DSI1.2 and CSI-2 1.00
- 1 Clock Lane and 1~4 Configurable Data Lanes
- Two Port Simultaneous Display Supported
- Up to 1.8Gb/s per Data Lane
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz
- Data Lane and Polarity Swapping
- Both Non-Burst and Burst Video Mode Supported
- Support RGB666, Loosely RGB666, RGB888, RGB565, 16-bit YCbCr4:2:2, 24-bit YCbCr 4:2:2 Video Format

● Dual-Port LVDS Transmitter

- Compatible with VESA and JEIDA standard
- 1~2 Configurable Port
- Two Port Simultaneous Display Supported
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz
- Support DE Mode
- Data Port, Data Lane and Polarity Swapping
- Programmable Pre-emphasis
- Support output SSC(30KHz $\pm$ 5%)

● TTL Output

- Support 24-bit RGB and BT656/BT1120
- Both DDR and SDR Sampling supported
- Support both 1.8V and 3.3V Voltage Output
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz

● MIPI Receiver

- Compliant with DCS1.02, D-PHY1.2, DSI1.2 and CSI-2 1.00

- 1 Clock Lane and 1~4 Configurable Data Lanes
- Two Port Input switchable
- Up to 1.8Gb/s per Data Lane
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz
- Data Lane and Polarity Swapping
- Both Non-Burst and Burst Video Mode Supported
- Support RGB666, Loosely RGB666, RGB888, RGB565, 16-bit YCbCr4:2:2, 24-bit YCbCr 4:2:2 Video Format

● Dual-Port LVDS Receiver

- Compatible with VESA and JEIDA standard
- 1~2 Configurable Port
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz
- Support DE Mode
- Data Port, Data Lane and Polarity Swapping
- Internal Rterm Calibration with Less than 5% Error
- Support input Dessc(30KHz $\pm$ 5%)

● TTL Input

- Support 24-bit RGB and BT656/BT1120
- Both DDR and SDR Sampling supported
- Support SYNC Mode and DE Mode
- Support both 1.8V and 3.3V Input Voltage
- Resolution Up to 1920x1200 60Hz or any other Resolution whose Pixel Clk less than 200MHz

● Miscellaneous

- 1.8V and 3.3V Power Supply
- Alternative Input and Output configuration
- for LVDS/TTL/MIPI
- MIPI/LVDS muxer and splitter supported
- MIPI-LVDS Levelshifter for FPGA Application
- Support 100KHz and 400KHz I2C Slave
- External 25MHz $\pm$ 200ppm Crystal Reference Clock is

Preferred

- Temperature Range: -40°C ~ +85°C
- Packaged in QFN64 7.5mm x 7.5mm

Description

The Lontium LT9211 is a high performance convertor which interconvertible between MIPI DSI/CSI-2/Dual-Port LVDS and TTL except for 24bit TTL to 24bit TTL with both SYNC and DE. The LT9211 deserializes input MIPI/LVDS/TTL video data, decodes packets, and converts the formatted video data stream to MIPI/LVDS/TTL transmitter output between AP and mobile

display panel or camera.

The LT9211 can be used as 2-Port MIPI/LVDS Repeater which support maximum 14dB input equalization and programmable pre-emphasis to improve performance.

The LT9211 can also be used as MIPI/LVDS Muxer and Splitter. **For MIPI Repeater, Muxer and Splitter, we do not support CSI RAW format.**

The LT9211 is fabricated in advanced CMOS process and implemented in 7.5x7.5mm QFN64 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

Applications

- Mobile systems
- Cellular handsets
- Digital video cameras
- Digital still cameras
- Tablet PC, Notebook PC
- Car Display and Camera System

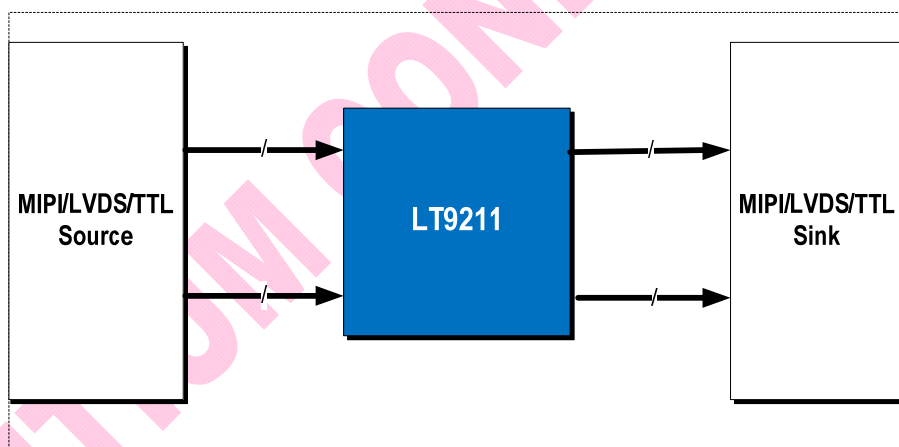


Figure 1. LT9211 Typical Application Diagram

Ordering Information

Table 1. Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT9211	-40°C to +85°C	QFN64 (7.5*7.5)	Tray

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