

LT9211R --- Product Brief

2-Port LVDS/MIPI/TTL to 2-Port LVDS/MIPI/TTL Converter with Frame Rate Conversion and Rotation

Features

● Dual-Port LVDS Transmitter

- Compatible with VESA and JEIDA standard
- 1~2 Configurable Port
- Up to 1080P 60Hz
- Data Port ,Data Lane and Polarity Swapping
- Programmable Pre-emphasis
- Support output SSC(30KHz±5%)

● 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 1080P 60Hz
- 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

● TTL Output

- Support 24-bit RGB and BT656/BT1120
- Both DDR and SDR supported
- Support both 1.8V and 3.3V Voltage Output
- Resolution up to 1080P 60Hz

● Dual-Port LVDS Receiver

- Compatible with VESA and JEIDA standard
- 1~2 Configurable Port
- Up to 1080P 60Hz
- Data Port ,Data Lane and Polarity Swapping
- Internal Rterm Calibration with Less than 5% Error
- Programmable Equalization
- Support input Dessc(30KHz±5%)

● TTL Input

- Support 24-bit RGB and BT656/BT1120
- Both DDR and SDR supported
- Support both 1.8V and 3.3V Input Voltage
- Resolution up to 1080P 60Hz

● Single-Port 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 1080P 60Hz
- 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

● DDR3 Controller

- Compliant with DDR3 JESD79-3F
- Band Width up to 1866Mbps
- Support X16 SDRAM Organization
- Programmable CAS Latency
- BL8 Supported Only
- Programmable Output Driver Impedance
- SR Supported

● Miscellaneous

- 1.5V, 1.8V and 3.3V Power Supply
- 90/270 Degree Video Rotation
- X2 or /2 Frame Rate Conversion
- Alternative Input and Output configuration for LVDS/TTL/MIPI except for LVDS to MIPI
- Support 100KHz and 400KHz I2C Slave
- External 25MHz Crystal Reference Clock
- Temperature Range: -40°C ~ +85°C
- Packaged in QFN128 14mm x 14mm

Description

The Lontium LT9211R is a high performance convertor which interconvertible between MIPI DSI/CSI-2/Dual-Port LVDS and TTL except for LVDS to MIPI. The LT9211R deserializes input MIPI/LVDS/TTL video data, decodes packets, rotates video, changes frame rate and converts the formatted video data stream to MIPI/LVDS/TTL transmitter output between AP and mobile display panel or camera.

The LT9211R is fabricated in advanced CMOS process

and implemented in 14mm x 14mm QFN128 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

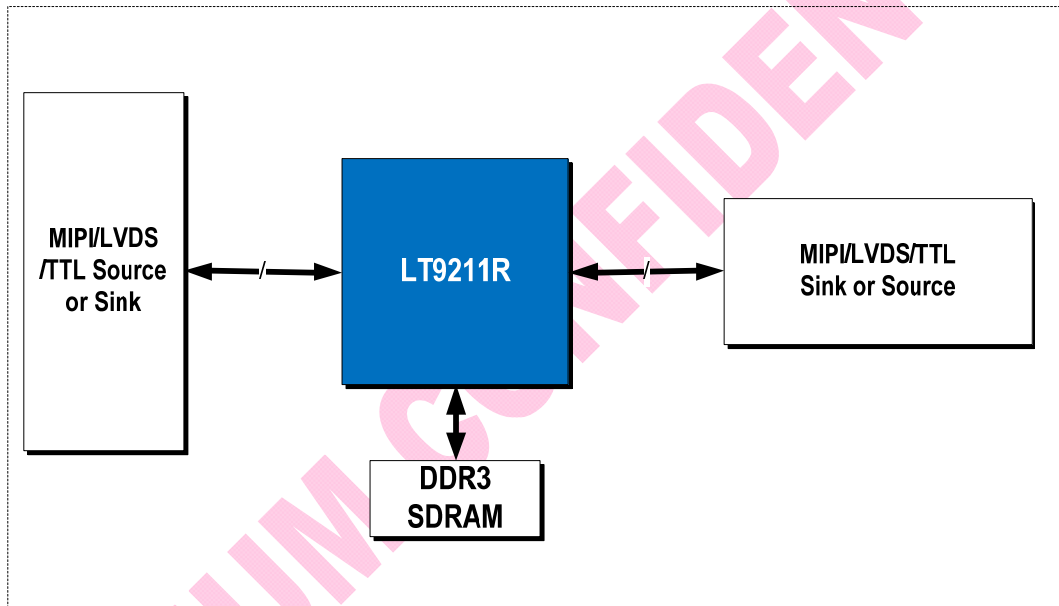


Figure 1. LT9211R Typical Application Diagram

Ordering Information

Table 1. Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT9211R	-40°C to +85°C	QFN128 (14*14)	

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