

LT9211R --- Product Brief

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

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.

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.

Applications

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

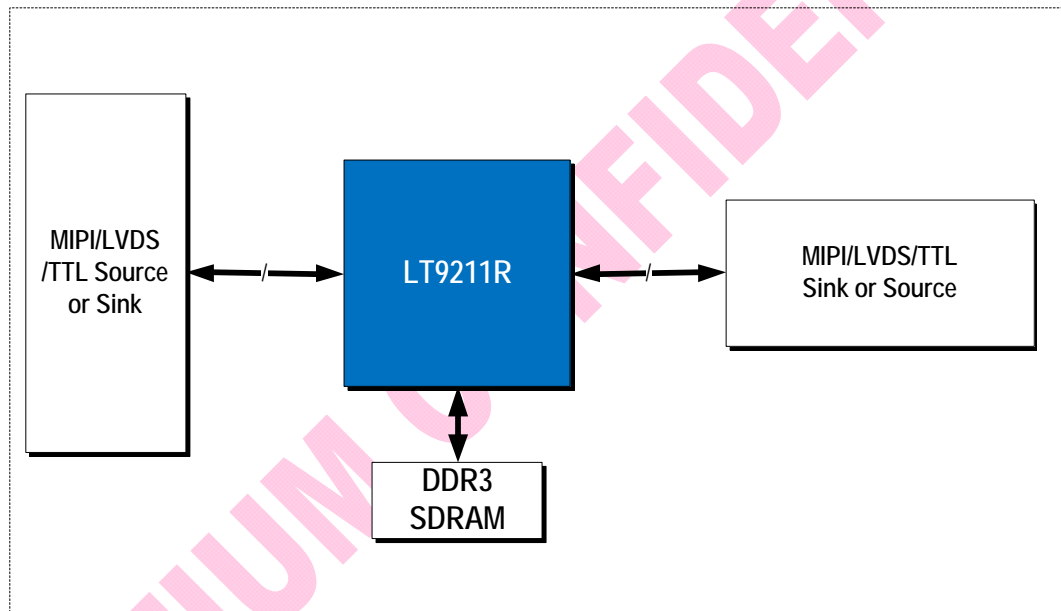


Figure 1. LT9211R Typical Application Diagram

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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