

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
 - Byte and Lane Swappable
- **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
- External DDR3 DRAM, Packaged in QFN128 14mm x 14mm

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.

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

Applications

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

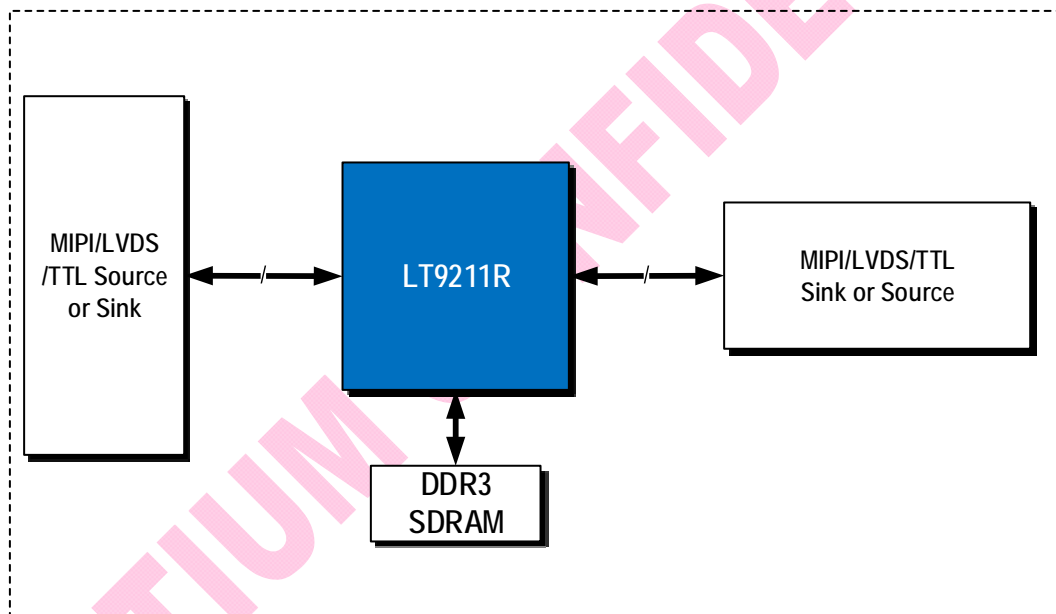


Figure 1. LT9211R Typical Application Diagram

Ordering Information

Table 1. Ordering Information

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

Copyright © 2018-2019 Lontium Semiconductor Corporation, All rights reserved.

Lontium Semiconductor Proprietary & Confidential

This document and the information it contains belong to Lontium Semiconductor. Any review, use, dissemination, distribution or copying of this document or its information outside the scope of a signed agreement with Lontium is strictly prohibited.

LONTIUM DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THOSE OF NONINFRINGEMENT, MERCHANTABILITY, TITLE AND FITNESS FOR A PARTICULAR PURPOSE. CUSTOMERS EXPRESSLY ASSUME THEIR OWN RISK IN RELYING ON THIS DOCUMENT.

LONTIUM PRODUCTS ARE NOT DESIGNED OR INTENDED FOR USE IN LIFE SUPPORT APPLIANCES, DEVICES OR SYSTEMS WHERE A MALFUNCTION OF A LONTIUM DEVICE COULD RESULT IN A PERSONAL INJURY OR LOSS OF LIFE.

Lontium assumes no responsibility for any errors in this document, and makes no commitment to update the information contained herein. Lontium reserves the right to change or discontinue this document and the products it describes at any time, without notice. Other than as set forth in a separate, signed, written agreement, Lontium grants the user of this document no right, title or interest in the document, the information it contains or the intellectual property it embodies.

Trademarks

Lontium™ 龙迅™ and ClearEdge™ is a registered trademark of Lontium Semiconductor. All Other brand names, product names, trademarks, and registered trademarks contained herein are the property of their respective owners.

Visit our corporate web page at: www.lontiumsemi.com

Technical support: support@lontium.com

Sales: sales@lontium.com