

LT89101R --- Product Brief

MIPI/LVDS/TTL Repeater with Rotation

Features

● Single-Port 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
- 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

● 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%)

● 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

● 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
- 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

● 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

● DDR3 Controller

- Compliant with DDR3 JESD79-3F
- BandWidth up to 1600Mbps
- Support X16 SDRAM Organization
- Programmable CAS Latency
- BL8 Supported Only
- Programmable Output Driver Impedance
- SR and ASR Supported

● Miscellaneous

- 1.5V, 1.8V and 3.3V Power Supply
- 90/270 Degree Video Rotation
- X2 or /2 Frame Rate Conversion
- Support 100KHz and 400KHz I2C Slave
- External 25MHz Crystal Reference Clock
- Temperature Range: -40°C ~ +85°C
- Packaged in QFN128 14mm x 14mm and BGA144 7mm x 7mm

Description

The Lontium LT89101R is a high performance MIPI DSI/CSI-2/Dual-Port LVDS and TTL repeater with Video Rotation between AP and mobile display panel or camera .

The LT89101R is fabricated in advanced CMOS process and implemented in 14mm x 14mm QFN128 and 7mm x 7mm BGA 144 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

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

Applications

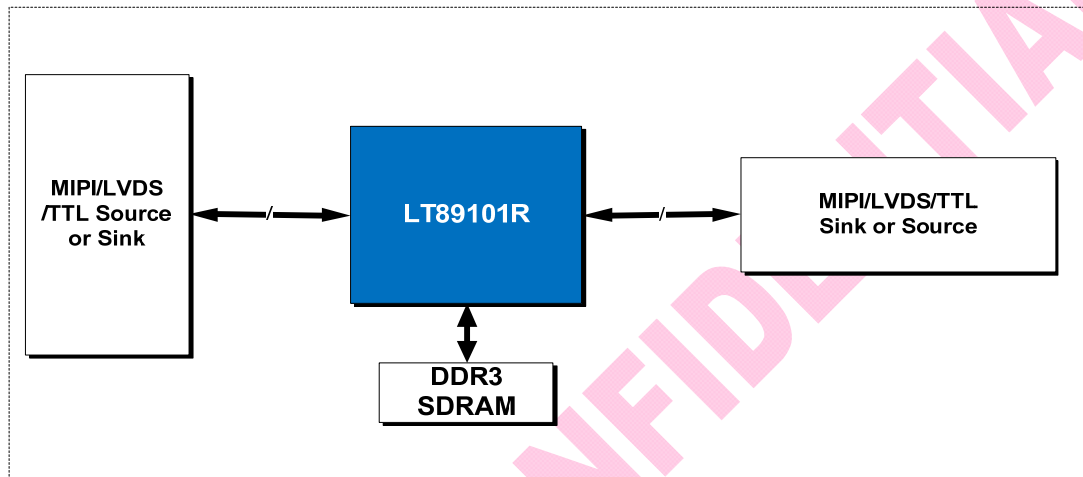


Figure 1. LT89101R Typical Application Diagram

Ordering Information

Table 1. Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT89101R	-40°C to +85°C	QFN128 (14*14)	
		BGA144(7*7)	

Copyright © 2018 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