LT9211C --- Product Brief

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

1. 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
  - 8-Lane CSI Supported
  - Up to 2.5Gb/s per Data Lane
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
  - 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
  - 1 Clock Lane and 5 Data Lanes per Port
  - Two Port Simultaneous Display Supported
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
  - Support DE Mode
  - Support YUV422
  - Programmable Pre-emphasis
  - Support output SSC(30KHz±5%)
- **TTL Output**
  - Support 24-bit RGB and BT656/BT1120
  - Both DDR and SDR Sampling supported
  - 1.8V and 3.3V Voltage Output based on VCCIO
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
- **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 2.5Gb/s per Data Lane
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
  - 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
  - 6/8/10bit Supported
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
  - Support DE Mode
  - Support YUV422
  - Internal Rterm Calibration with Less than 5% Error
  - Support input De-SSC(30KHz±5%)
- **TTL Input**
  - Support 24-bit RGB and BT656/BT1120
  - Both DDR and SDR Sampling supported
  - Support SYNC Mode and DE Mode
  - 1.8V and 3.3V Input Voltage based on VCCIO
  - Resolution Up to 3840x2160 30Hz or any other Resolution whose Pixel Clk between 6.25MHz to 297MHz
- **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 level shifter for FPGA Application
  - Support 100KHz and 400KHz I2C Slave

- External 25MHz±50ppm Crystal Reference Clock is Preferred
- Temperature Range: -40°C ~ +85°C
- Packaged in QFN64 7.5mm x 7.5mm

2. General Description

The Lontium LT9211C 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, and the conversion between 2-port 10-bit LVDS and 24bit TTL with both SYNC and DE is not recommended. The LT9211C 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 LT9211C can be used as 2-Port MIPI/LVDS Repeater which support maximum 14dB input equalization and programmable pre-emphasis to improve performance.

The LT9211C can also be used as MIPI/LVDS Muxer and Splitter. **For MIPI Repeater, Muxer and Splitter, we also support CSI RAW format with continuous clock.**

Except TTL input and output, the VCCIO could be 1.8V, when TTL input, the VCCIO voltage must be greater than the TTL input high voltage level, and the TTL output voltage level is the VCCIO.

The LT9211C 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.

3. Applications

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

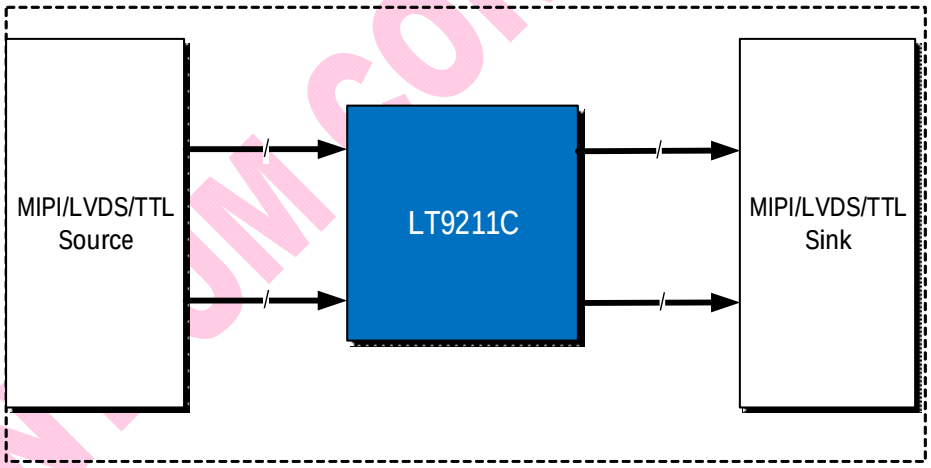

Figure 3.1 LT9211C Typical Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT9211C	LT9211C_U1Q07CEN	Preview	QFN64 (7.5*7.5)	Cu	E	−40°C to +85°C	N	Tray	2600pcs

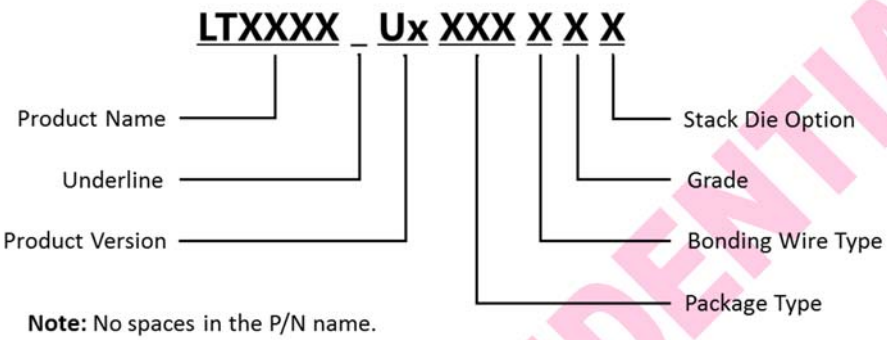

Figure 4.1 Part Number Naming Rules

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