

# LT933 --- Product Brief

## Automotive Camera Serializer

### Features

- **MIPI CSI Receiver**
  - Compliant with D-PHY1.2 & CSI-2 1.3
  - One port with 1 clock lane and 4 data lanes at maximum 1 Gbps per each lane
  - Video Formats: RAW8, RAW10, RAW12, RAW16 and others compliant with D-PHY1.2 & CSI-2 1.3 in the range of bandwidth
- **TTL Input**
  - SDR/DDR Sampling Support
  - Max Pixel Clock 37.125MHz
  - Video Formats: BT1120
- **Serializer Link**
  - One bidirectional link with maximum 4.32Gbps forward data channel and max 3.7Mbps back control channel
  - Transmit video, local I2C slave data and GPIO information on the forward data channel with FEC encoder
  - Receive I2C master data and GPIO information, frame sync from back control channel
  - POC/POE
  - Compatible with LT934(deserializer)
- **Miscellaneous**
  - External oscillator
  - External vsync from back control channel

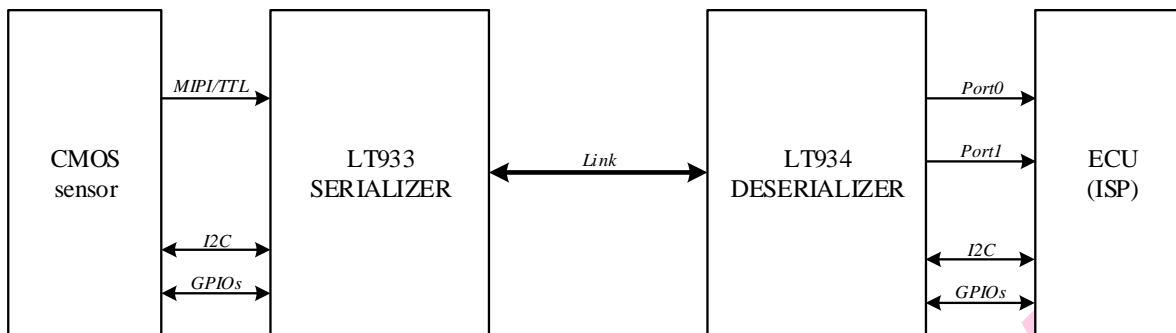
- GPIOs for system controls
- Camera Synchronization
- Temperature and Voltage sensing
- Integrated 400KHz I2C master controlled from ECU to image sensor
- Build-in Self Test mode
- Power Supply: 1.8V,1.2V
- LDO 1.8V-1.2V
- AEC-Q100 Grade 2

### Description

The LT933 serializer is a part of Lontium's long distance video transmission family for Advanced Driver Assistance Systems(ADAS), designed to support up to 1080P@60Hz with a maximum 15m coax( POC ) or STP cable. The chip delivers a 4.32Gbps forward data channel and back control channel and supports power over the cable. Together with a companion deserializer, LT933 is able to synchronize the camera sensor with the whole system.

### Application

- Advanced Driver Assistance Systems(ADAS)
  - Surround View System
  - Front and Rear Image Sensor
- MIPI-CSI Extender


**Figure 1. Application Diagram**

## Ordering Information

**Table 1. Ordering Information**

Part Number	Operating Temperature Range	Package	Packing Method
LT933	-40°C to +105°C	QFN32 (5 x 5)	Tray

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