

LT947C --- Product Brief

Automotive Serializer

1. Features

- **LVDS Receiver**
 - Compatible with VESA, JEIDA standard
 - 1/2 configurable port with 1 clock lane and 4 data lanes per port for VESA and JEIDA standard
 - Configurable sync code detected
 - Data rate up to 1.2Gbps
- **MIPI DSI/CSI Receiver**
 - Compliant with D-PHY1.2 & DSI 1.3 & CSI-2 1.3
 - 1/2 configurable port
 - 1 clock lane and 1/2/3/4 configurable data lanes for each port; 2.5Gbps per data lane
- **TTL Receiver**
 - 20-lane SDR/DDR Sampling Support
 - Max Pixel Clock 74.25MHz
- **ADP Transmitter**
 - 1/2 configurable link
 - Bidirectional transmission with 8.1/6.48/4.32/2.16 Gbps/lane forward data channel and max 29.7Mbps back control channel.
 - Transmit video, I2C data and audio on the forward data channel with scrambling, DC balance and FEC
 - Carry I2C data and interrupt from back control channel with DC balance and ECC
 - Maximum 5m transmission distance for 8.1Gbps, and

maximum 15m transmission distance for 6.48/4.32/ 2.16 Gbps, depending on the attenuation of cable.

- Typical resolution 4K YUV422 60Hz with 2 lanes

- **Miscellaneous**

- DeSSC for LVDS receiver and SSC for transmitter
- Interrupt output
- additional GPIOs
- Temperature and Voltage sensing
- Integrated 100KHz, 400KHz, 1MHz I2C slave
- 8-channel I2S slave
- 1.2V power for core and 1.8V/3.3V power for IO
- POC/POE

2. General Description

The LT947C serializer is a part of Lontium’s long distance video transmission family for Advanced Driver Assistance Systems (ADAS), designed to provide a solution for LVDS, MIPI and TTL video transmission with a maximum 15m coax (POC) or STP cable. The chip delivers an 8.1Gbps/lane forward data channel and back control channel and supports power over each cable.

3. Applications

- Automotive Display Application
- LVDS/MIPI/TTL Extender

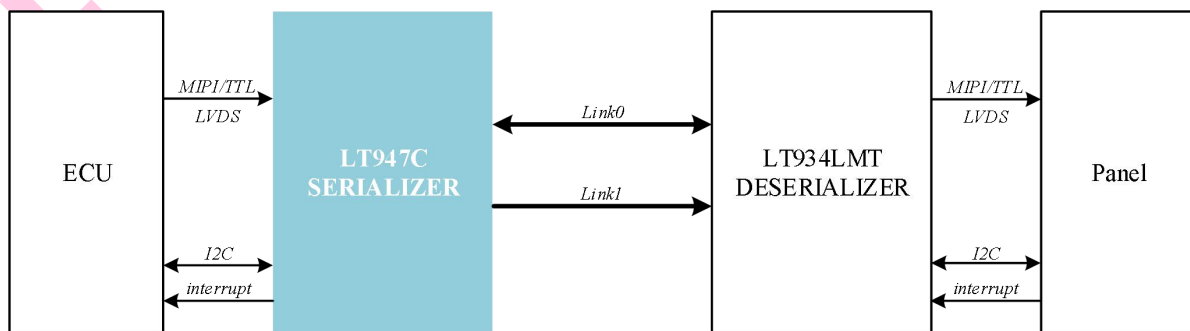


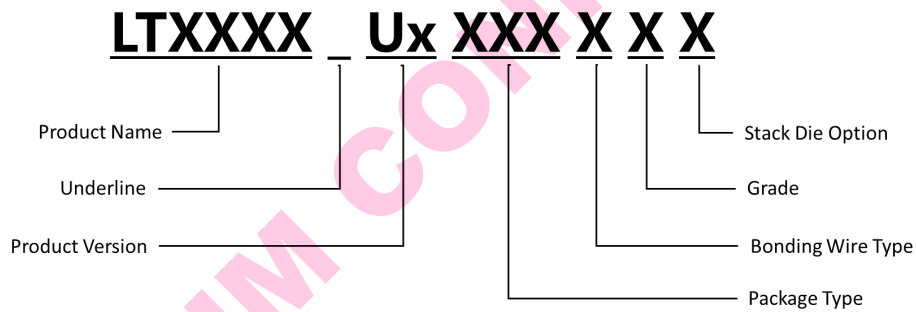
Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	MSL	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT947C04	LT947C04_U2Q17CAN	MP	QFN56 (7*7)Saw	3	Cu	A	-40°C to +105°C	N	Tray	2600pcs
LT947C06	LT947C06_U2Q17CAN	MP	QFN56 (7*7)Saw	3	Cu	A	-40°C to +105°C	N	Tray	2600pcs
LT947C08	LT947C08_U2Q17CAN	MP	QFN56 (7*7)Saw	3	Cu	A	-40°C to +105°C	N	Tray	2600pcs
LT947C04	LT947C04_U2Q17CEN	MP	QFN56 (7*7)Saw	3	Cu	E	-40°C to +85°C	N	Tray	2600pcs
LT947C06	LT947C06_U2Q17CEN	MP	QFN56 (7*7)Saw	3	Cu	E	-40°C to +85°C	N	Tray	2600pcs
LT947C08	LT947C08_U2Q17CEN	MP	QFN56 (7*7)Saw	3	Cu	E	-40°C to +85°C	N	Tray	2600pcs

Note: LT947C04_U2Q17CAN, LT947C06_U2Q17CAN and LT947C08_U2Q17CAN are automotive grade devices which are qualified by AEC-Q100 Grade 2 testing.



Note: No spaces in the P/N name.

Figure 4.1 Part Number Naming Rules

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