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 each 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 1/2/4 configurable data lanes for each port; 2.5Gbps per data lane
- **TTL Receiver**
  - 20-lane SDR/DDR Sampling Support
  - Max Pixel Clock 74.25MHz
- **Automotive Display Port Transmitter**
  - 1/2 configurable link
  - Bidirectional transmission with maximum 8.1Gbps/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 lower speed, depending on the attenuation of cable.
  - Typical resolution 4K RGB888 60Hz with 2 lanes
- **Miscellaneous**
  - DeSSC for receiver and SSC for transmitter
  - Interrupt output
  - additional GPIOs
  - Temperature and Voltage sensing
  - Integrated 100KHz,400KHz, 1MHz I2C slave
  - 2-channel I2S slave
  - 1.8V power for core and 1.8/3.3V power for IO
  - POC/POE
  - AEC-Q100 Grade 2

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

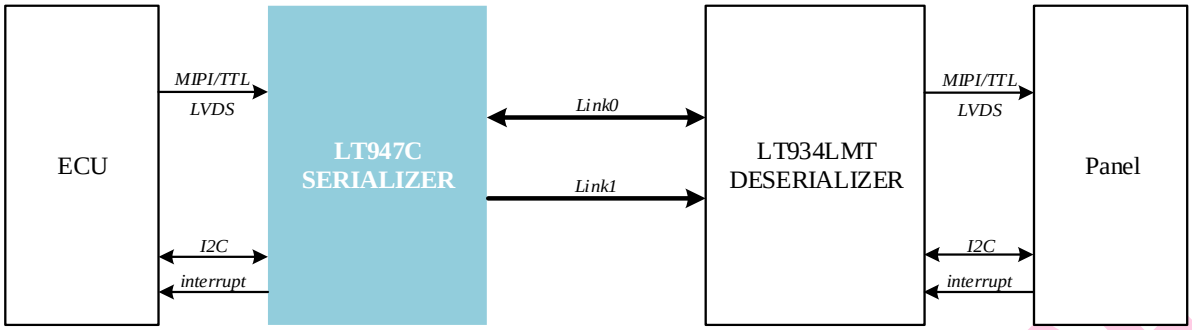

Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT947C04	LT947C04_U1Q17CAN	Preview	QFN56 (7*7)Saw	Cu	A	−40°C to +105°C	N	Tray	TBD
LT947C06	LT947C06_U1Q17CAN	Preview	QFN56 (7*7)Saw	Cu	A	−40°C to +105°C	N	Tray	TBD
LT947C08	LT947C08_U1Q17CAN	Preview	QFN56 (7*7)Saw	Cu	A	−40°C to +105°C	N	Tray	TBD

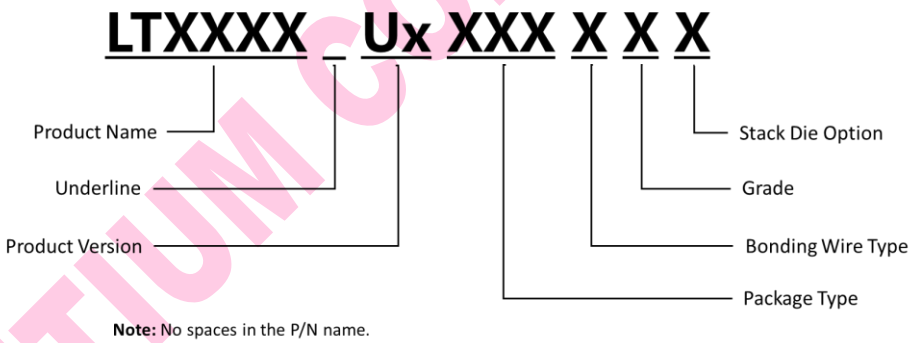

Figure 4.1 Part Number Naming Rules

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