

LT948DX --- Product Brief

Automotive Deserializer

1. Features

- **eDP Transmitter**

- Compliant with Embedded DisplayPort version 1.4
- 1/2/4 configurable lane with 1.62Gbps, 2.7Gbps, 5.4Gbps for each lane
- Aux channel
- Support ASSR

- **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 30Hz with 1 lane, 4K RGB888 60Hz with 2 lanes

- **Automotive Display Port Receiver**

- 1/2 configurable link
- Bidirectional transmission with maximum 8.1Gbps/lane forward data channel and maximum 29.7Mbps back control channel
- Receive video, I2C data and audio from the forward data channel with scrambling, DC balance and FEC
- Carry reference clock, I2C data, interrupt and frame

sync on 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 30Hz with 1 lane, 4K RGB888 60Hz with 2 lanes

- **Miscellaneous**

- SSC for transmitter
- Interrupt Input
- Temperature and Voltage sensing
- Integrated 100KHz, 400KHz, 1MHz I2C master and slave
- 8-channel I2S master
- External 27MHz oscillator
- 1.8V, 1.2V power for core and 1.8/3.3V power for IO
- POC/POE
- AEC-Q100 Grade 2

2. General Description

The LT948DX deserializer is a part of Lontium's long distance video transmission family for Advanced Driver Assistance Systems (ADAS), designed to provide a solution for eDP video transmission with a maximum 15m coaxial (POC) or STP cable. The chip delivers an 8.1Gbps /lane forward data channel and back control channel and supports power the cable.

3. Applications

- Advanced Driver Assistance Systems (ADAS)
 - Display System

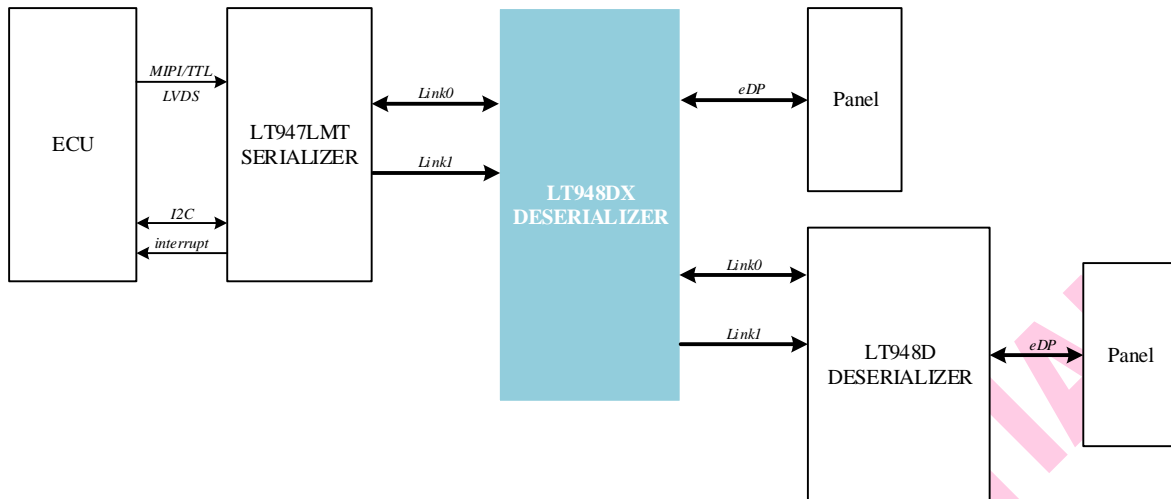


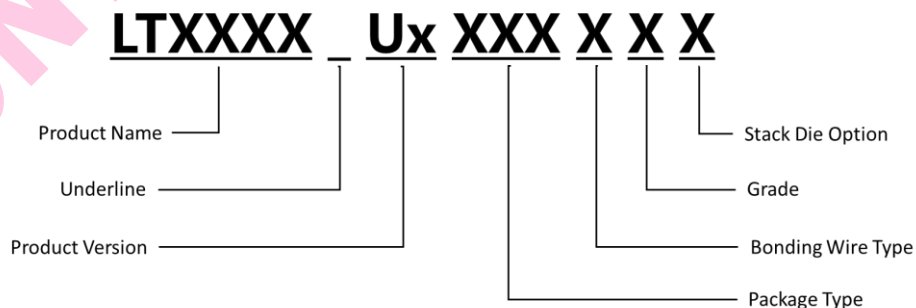
Figure 3.1 Application Diagram

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
LT948DX04	LT948DX04_U1Q04CAN	Preview	QFN76 (9*9)Saw	Cu	A	-40°C to +105°C	N	Tray	TBD
LT948DX06	LT948DX06_U1Q04CAN	Preview	QFN76 (9*9)Saw	Cu	A	-40°C to +105°C	N	Tray	TBD
LT948DX08	LT948DX08_U1Q04CAN	Preview	QFN76 (9*9)Saw	Cu	A	-40°C to +105°C	N	Tray	TBD
LT948DX04	LT948DX04_U1Q04CEN	Preview	QFN76 (9*9)Saw	Cu	E	-40°C to +85°C	N	Tray	TBD
LT948DX06	LT948DX06_U1Q04CEN	Preview	QFN76 (9*9)Saw	Cu	E	-40°C to +85°C	N	Tray	TBD
LT948DX08	LT948DX08_U1Q04CEN	Preview	QFN76 (9*9)Saw	Cu	E	-40°C to +85°C	N	Tray	TBD

Note: AEC-Q100 is just for Grade A.



Note: No spaces in the P/N name.

Figure 4.1 Part Number Naming Rules

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