

LT87101CD --- Product Brief

Type-C-to-DP and DP-to-Type-C Converter

1. Features

- Compliant to VESA DP1.2, Type-C r1.2, USB PD2.0 and DP Alt Mode v1.0 Standards
- Support Hot-Plug Detect for DP Output Interface
- Programmable Input Equalization
- Programmable Output Swing and De-emphasis
- 3-level Current Ability Detection for Type-C Power: USB Default, 1.5A@5V, 3A@5V
- SBU Data Path Control for DP Alt Mode
- Internal MCU and Flash for Online Firmware Upgrade
- Support External I2C Debug
- 1.8V/3.3V Power Supply

2. General Description

LT87101CD is a signal re-driver with Type-C input and DP output or DP input and Type-C output. DP signal quality is deeply-optimized and enhanced by performing cable or board trace loss compensation. The device complies with VESA DP1.2 specifications. It supports 4-lane DP main link interface or 2-lane DP main link interface.

The input receiver of LT87101CD features a multi-level

programmable linear equalizer, supporting up to 20dB loss compensation due to Inter-Symbol Interference (ISI). The output transmitter re-drives the received signal with multi-level programmable output swing and up to 6dB de-emphasis.

Type-C operating is controlled by CC detect, CC logic and PD management unit. A high performance passive differential switch is also integrated to realize data channel exchange according to Type-C interface insert orientation. This relieves BOM cost and mobile system design complexity. The switch function is compliant with VESA DP Alternate Mode standard and support Pin Assignment C or D in different applications.

The LT87101CD is fabricated in advanced CMOS process and implemented in a small outline 5mmx5mm QFN40 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

3. Applications

- Smartphone, Tablet and Other Mobile Devices
- VR/AR Eco-System and Home Entertainment
- PC, Notebook, All-in-Ones Computer and Docking

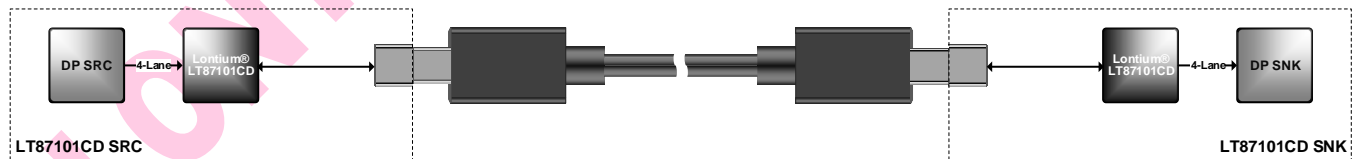


Figure 3.1 LT87101CD Typical Application Diagram

4. Ordering Information

Table 4.1.1 Ordering Information

Part Number	Product Version	Product Status	Operating Temperature Range	Package	Packing Method	MPQ
LT87101CD	U1	MP	-40°C to +85°C	QFN40 (5*5)	Tray	4900pcs
MP: Mass Production.						

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