

# LT87121 --- Product Brief

## eDPx to eDP/DP Converter

### 1. Features

#### ● eDPx Receiver

- 1/2/4/8 configurable data lanes
- Input data rate is up to 3.75Gbps
- Adaptive receiver equalization for PCB and cable losses
- Support 3-byte,4-byte mode
- Support 6bit,8bit,10bit color depth
- Support 2 sections,4 sections input mode
- Support Center Spread Spectrum ,  $\pm 5000\text{ppm}@30\text{kHz}$

#### ● eDP/DP Transmitter

- Compliant with VESA eDP1.4/DP 1.2
- Support 1.62/2.7/5.4 Gbps per lane
- Support 1/2/4 lanes
- Support SSC
- Programmable transmitter swing and pre-emphasis
- 1Mbps AUX channel
- MCCS Over AUX Support
- Support ASSR
- Support video formats: 6bpc RGB, 8bpc RGB/YCbCr 422/YCbCr 444, 10bpc RGB/YCbCr422/YCbCr 444

#### ● Miscellaneous

- Integrated microprocessor
- Embedded SPI flash for firmware
- Integrated 100/400kHz I2C slave
- Firmware update through SPI or I2C interface
- IIS/SPDIF input support(transmitter is DP mode)
- CSC support
- Dither support
- UART Support
- Backlight Control Support(transmitter is eDP mode)
- Power supply: 3.3V for I/O and 1.2V for core
- Temperature Range:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- 64 pin QFN 7.5\*7.5 package

### 2. General Description

The LT87121 is a high performance eDPx to eDp/DP converter, designed to connect eDPx source to an eDP/DP sink.

The device is capable of automatic operation which is enabled by an integrated microprocessor that uses an embedded SPI flash for firmware storage. System control is also available through the use of a dedicated configuration I2C slave interface.

### 3. Applications



Figure 3.1 Application Diagram

### 4. Ordering Information

Table 4.1 Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT87121	-40°C to +85°C	QFN64 (7.5*7.5)	Tray

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