LT89121 --- Product Brief

eDPx to MIPI Converter

Features

- **eDPx Receiver**
  - 1/2/4/8 configurable data lanes
  - Input data rate is up to 3.75Gbps
  - Support lane swap(arbitrarily) and polarity inversion(independent)
  - Adaptive receiver equalization for PCB and cable losses
  - Support 3-byte,4-byte,5-byte mode
  - Support 6bit,8bit,10bit,12bit color depth
  - Support 2 sections,4 sections input mode
  - Support Center Spread Spectrum , 30kHz/5000ppm
- **Dual-Port MIPI DSI/CSI Transmitter**
  - Compliant with DCS1.1, D-PHY1.2, DSI1.3 and CSI-2 1.3
  - 1/2 configurable port number
  - 1 clock lane and 1/2/3/4 configurable data lanes per port
  - 80Mbps~2Gbps per data lane
  - Support data lane swap(arbitrarily) and polarity inversion(independent)
  - Programmable transmitter swing and pre-emphasis
  - Support Non-Busrt mode, Burst mode and Command mode
  - DSI support video formats: RGB565/666/888, Loosely RGB666, 16/24-bit YCbCr4:2:2, Loosely 20-bit

YCbCr4:2:2, 12-bit YCbCr4:2:0
  - CSI support video formats: RGB565/666/888, YUV422 8/10-bit, Legacy YUV420 8-bit
  - Support de-skew function
- **Miscellaneous**
  - Internal or external oscillator
  - Integrated microprocessor
  - Embedded SPI flash for firmware
  - Integrated 100/400kHz I2C slave
  - Firmware update through SPI or I2C interface
  - UART Support
  - Backlight Control Support
  - Low power consumption
  - Power supply: 3.3V for I/O and 1.2V for core
  - Temperature Range: -40°C ~ +85°C
  - 76 pin QFN 9*9 package

Description

The LT89121 is a high performance eDPx to MIPI converter, designed to connect eDPx source to an MIPI 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.
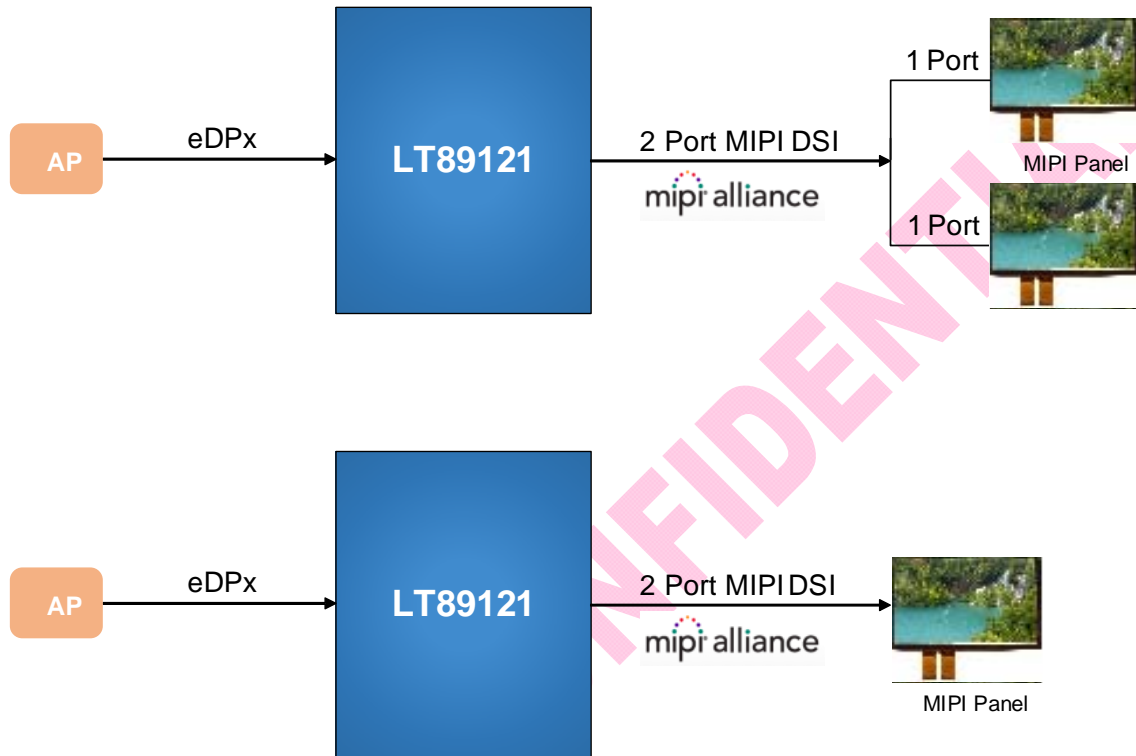
Applications

Figure 1. Application Diagram

Ordering Information

Table 1. Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT89121	−40° C to +85° C	QFN76 (9*9)	Tray

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