LT7911E --- Product Brief

eDP to 2ports MIPI DPHY Converter

1. Features

- **eDP1.4 Receiver**
  - Compliant with VESA eDP1.4
  - Support 1.62Gbps to 5.67Gbps input data with 270Mbps increasing step
  - Support 1/2/4 lanes
  - Support SSC
  - 1Mbps AUX channel, supports polarity inversion
  - Support SST mode only
  - Support ASSR
  - Adaptive receiver equalization training for PCB, cable and connector losses
  - Support lane swap(arbitrarily) and polarity inversion(independent)
  - Support Adaptive–Sync
  - eDP Receiver supports RGB666, RGB888, RGBG8888 input

- **MIPI DSI Transmitter**
  - Compliant with D-PHY1.2 & DSI 1.3 & CSI-2 1.3 ；
  - 1 port or 2 ports output
  - 1 clock lane, and 1/2/3/4 configurable data lanes per port
  - Maximum 2Gbps per data lane
  - Programmable transmitter swing and pre-emphasis
  - Support lane swap(arbitrarily) and polarity inversion(independent)
  - DSI Transmitter supports RGB666, RGB888, RGBG8888 output
  - Support Video mode and Command mode

- **DSC**
  - Support DSC pass-through

- **Video Process**
  - Frame rate control function
  - Zoom scaling down (hactive 2752 max)
  - CSC: RGBG <-> RGB <-> YCbCr444 <-> YCbCr422

- **Miscellaneous**
  - Integrated 100KHz/400KHz I2C master/slave
  - Integrated microprocessor
  - Integrated 5bit ADC for temperature sensor input detect
  - Internal 27MHz oscillator
  - Embedded SPI flash for firmware
  - Firmware update through SPI or I2C interface
  - Support PWM detection
  - Power supply: 1.1V,1.2V and 1.8V

2. General Description

LT7911E is a high performance eDP to MIPI D-PHY converter, designed to connect a eDP source to an MIPI display panel.

LT7911E integrates an eDP1.4 compliant receiver which support 1.62Gbps to 5.67Gbps input data with 270Mbps increasing step, and a 2 ports D-PHY1.2 compliant transmitter with maximum 2Gbps per lane output data rate. It also integrates a 27MHz oscillator for reference clock generation.

LT7911E has embedded a PSRAM for video processing, such as frame rate variation, image scaling.

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

- Mobile system
- Display

SOURCE → eDP1.4 → **LT7911E** → 2 Port D-PHY1.2 → Panel

Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	MSL	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT7911E	LT7911E_U1Q21CEP	MP	QFN68 (5*8)Saw	3	Cu	E	−40°C to +85°C	P	Tray	3640pcs

LTXXXX _ Ux XXX X X X

Product Name
Underline
Product Version

Stack Die Option
Grade
Bonding Wire Type
Package Type

Note: No spaces in the P/N name.
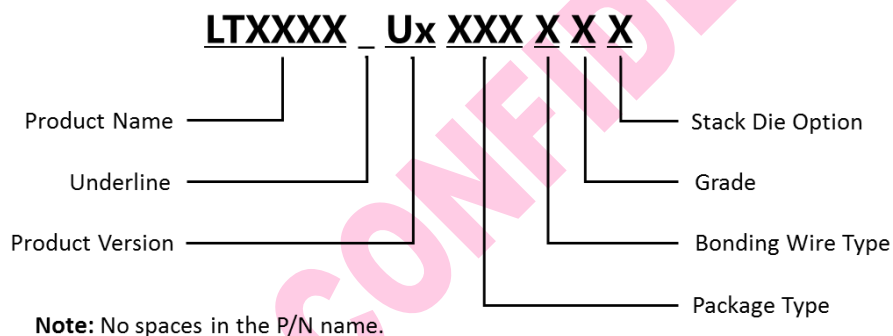
Figure 4.1 Part Number Naming Rules

Visit our corporate web page at: www.lontiumsemi.com
Technical support: support@lontium.com
Sales: sales@lontium.com