LT8912B --- Product Brief

Single-Channel MIPI® DSI Bridge to LVDS/HDMI

1. Features

- **One-Channel MIPI® DSI Receiver**
  - Compliant with D-PHY1.1 and DSI1.02
  - 1 clock lane and 1~4 configurable data lanes
  - 80Mbps~1.5Gbps per data lane
  - Internal Rterm calibration less than 5% error
  - 2-bit programmable equalization
  - Only Continuous clock mode supported
- **One-Channel LVDS Transmitter**
  - 1 clock lane and 4 data lanes
  - Maximum 1.0Gbps per data lane
  - Reduced output swing for low EMI
- **HDMI Transmitter**
  - Support HDMI1.4 standard
  - Up to 60Hz 1080p 8-bit HDMI output
  - 7-bit automatic or manual output swing calibration
  - 3-bit programmable pre-emphasis
  - No DDC and HDCP support for LT8912B
- **Miscellaneous**
  - Single 1.8V supply power

2. General Description

The Lontium LT8912B MIPI® DSI to LVDS and HDMI bridge features a single-channel MIPI® D-PHY receiver front-end configuration with 4 data lanes per channel operating at 1.5Gbps per data lane and a maximum input bandwidth up to 6Gbps.

For screen application, the bridge decodes MIPI® DSI 18bpp RGB666 and 24bpp RGB888 packets and converts the formatted video data stream to a compatible LVDS output operating at pixel clock operating from 25MHz to 154MHz, offering a single-link LVDS with 4 data lanes per link.

For TV application, the bridge provides a HDMI data output with optional SPDIF or 2-channel I2S serial audio input. Its high fidelity 2-channel I2S can transmit stereo up to a 192kHz sampling rate. The SPDIF can carry stereo LPCM audio or compressed audio, including Dolby® Digital and DTS®.

3. Applications

- Mobile systems
- Digital still cameras, Digital video cameras
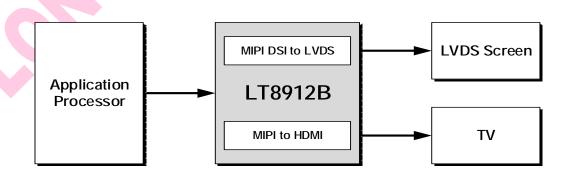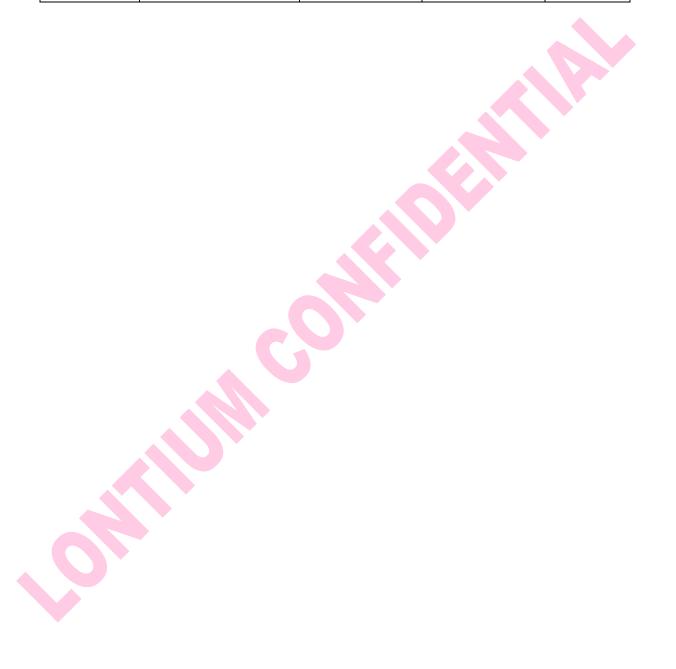- Cellular Handsets
- Personal Media players
- Gaming

Figure 3.1   Application Diagram

4. Ordering Information

Table 4.1   Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method	MPQ
LT8912B	−40°C to +85°C	QFN64(7.5*7.5)	Tray	2600pcs

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