LT6792 --- Product Brief

Type-C/DP1.2/HDMI1.4 to MIPI DSI/CSI/LVDS

Features

- **Type-C**
  - Compliant with VESA DisplayPort Alt Mode on USB Type-C Standard version1.0
  - Compliant with USB Power Delivery Rev.2.0
  - Compatible with USB Type-C V1.1
  - Built-in CC controller for plug and orientation detection
  - Dual-port CC for charger and normal communication.
- **DP1.2 Receiver**
  - Compliant to DisplayPort Specification 1.2 for 1.62Gbps, 2.7Gbps ,5.4Gbps
  - Support DisplayPort 1, 2 , 4 lanes
  - Support HDCP 1.3
  - Adaptive DisplayPort Receiver Equalization for PCB, cable and connector losses
  - Support AUX and IIC for firmware updating
- **HDMI1.4 Receiver**
  - Compliant to the HDMI 1.4 specification with TMDS data rates up to 3.4Gbps per channel
  - Support HDCP 1.4
  - Adaptive receiver Equalization for PCB, cable and connector losses
- **Single/Dual-Port/Quad-Port LVDS Transmitter**
  - Compatible with VESA and JEIDA standard
  - 1/2/4 Configurable Port
  - 1 clock lane and 4 configurable data lanes per port
  - Data Lane and Polarity Swapping
  - Support Maximum Data Rate 1.2Gb/s/lane
  - Output Color Depth supports 6-bit and 8-bit
  - Video stream copy mode for each dual-port
  - Side-by-side 3D support
- **Single/Dual-Port/Quad-Port MIPI® DSI/CSI Transmitter**
  - Compliant with DCS1.02, D-PHY1.2& DSI1.02 &CSI-2 1.0
  - 1 Clock Lane, and 1~4 Configurable Data Lanes per port
  - 1/2/4 configurable port
  - 80Mb/s~1.5Gb/s per Data Lane
  - Data Lane and Polarity Swapping
  - Maximum 64Pixels overlap for each half
  - Burst Mode and Command ModeSupported
  - Support RGB666, Loosely RGB666, RGB888, RGB565, 16-bit YCbCr4:2:2,20-bit YCbCr4:2:2,24-bit YCbCr 4:2:2, 12-bit YCbCr4:2:0Video Format
  - Video stream copy mode for each single/dual-port
  - Side-by-side 3D support
  - Port swap
  - No de-interlace
- **Miscellaneous**
  - 3.3V/1.2V Supply Power
  - Internal CSC support conversions from YCbCr 4:4:4 to RGB, and YCbCr 4:2:2 to YCbCr 4:4:4
  - Support SPDIF and 8-channel IIS audio output
  - Support 100KHz and 400KHz I2C slave
  - Power from phone or adapter mode selection
  - Integrated Microprocessor
  - Embedded EDID shadow.
  - Temperature Range: -40^{0}C ~ +85^{0}C
  - ESD 4kV HBM

Description

The LT6792 is a high performance Type-C/DP1.2 to MIPI®DSI/CSI/LVDS chip for VR/Smart phone/Display application.

For DP1.2 input, LT6792 can be configured as 1,2,4lane, also support lane swap function. Adaptive equalization make it suitable for long cable application and the maximum bandwidth is up to 21.6Gbps

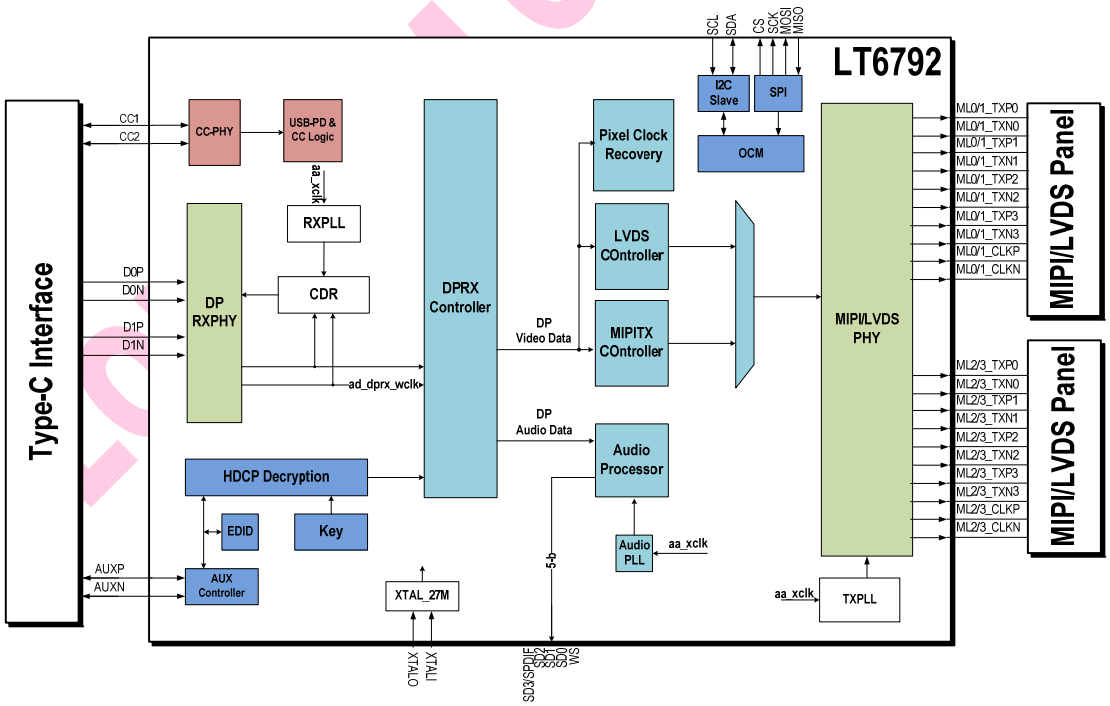
For LVDS output, LT6792 can be configured as single-port or dual-port or quad-port. For 2D video stream, the same video stream can be mapped to two separated panel, for 3D video format, left side data can be sent to one panel, and right side data can be sent to another panel.

For MIPI®DSI/CSI output, LT6792 features configurable single-port or dual-port or quad-port MIPI®DSI/CSI with 1 high-speed clock lane and 1~4 high-speed data lanes operating at maximum 1.5Gb/s/lane, which can support a totalbandwidth of up to 24Gbps. LT6792 supports Burst mode DSI video data transferring, also support flexible video data mapping path.

Application

- Mobile systems
- VR
- Display

Block Diagram



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