

Features

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z HDMI1.4 Receiver
- ƒ Compliant to HDMI1.4 Standard
- ƒ Support 3D Video Data Stream
- ƒ Support HDCP1.4 and DDC Slave for EDID
- ƒ Support HDMI2.0 YUV4:2:0 Video Format
- ƒ Support Resolution up to 4Kx2K@30Hz for RGB and 4Kx2K@60Hz for YUV4:2:0
- ƒ Support Hot-Plug Detect
- ƒ Support Status and Control Data Channel (SCDC)
- ƒ No HEAC and CEC Support

z DP1.2 Transmitter
- ƒ Compliant to VESA DP1.2 Standard
- ƒ Support Four Lanes with 1.62Gbps (RBR), 2.7Gbps (HBR) or 5.4Gbps (HBR2) Data Rate
- ƒ Data Lane and Polarity Swapping
- ƒ Support HDCP1.3 Encryption
- ƒ Support 18/24-bit RGB and YUV4:2:0 Data Format
- ƒ Build-in Pattern Generation
- ƒ Support Hot-Plug Detect
- ƒ Support Backlight Control for Screen Application
- ƒ Optional SSC 0.5% Down-Spreading Output
- ƒ Configurable and Power-on-Calibrated Output Swing for Optimized EMI
- ƒ Internal Rterm Calibration with Less than 5% Error

z USB Type-C
- ƒ Compatible with USB3.1 Gen1, USB Type-C R1.0, DP Alt Mode V1.0 and USB PD R2.0
- ƒ 3 Data Roles Supported: DFP, UFP and DRP
- ƒ 2 Power Roles Supported: Source and Sink
- ƒ USB PD-PHY (Tx/Rx) and BMC Encoding / Decoding
- ƒ USB PD Protocol Control by Software
- ƒ Bi-directional Differential Passive Switch for USB3.1 Gen1 SS signal with less than 2.5-dB Insertion Loss, Controlled by Internal or External CC logic module
- ƒ USB Full-Featured, Orientation and Role Detection
- ƒ 3-level Current Ability Advertise (Host Mode) or Detection (Device Mode) for Type-C Power: USB Default, 1.5A@5V, 3A@5V
- ƒ SBU Data Path Control for DP Alt Mode
- ƒ OCP Control for External VBUS Power Switch
- ƒ Dead Battery Supports (Sink Mode) When No Power Applied

z Audio Input
- ƒ Support SPDIF and up to 8-CH I2S Audio Input in MIPI mode

z Miscellaneous
- ƒ 1.8V/3.3V Dual Supply Power
- ƒ External 25MHz Rrystal Reference Clock
- ƒ Temperap79g Range: -40°C to +85°C
- ƒ Packaged in 5mm x 5mm BGA81 and 7.5mm x 7.5mm QFN64

Description

The Lontium LT9721 is MIPI/HDMI to DP converter with internal Type-C Alternate Mode switch and PD controller. For MIPI DSI® input, LT9721 feap79gs a single-port MIPI DSI receiver with 1 clock lane and 4 data lanes operaping at maximum 1.5Gbps per data lane and a maximum input

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