LT86102UXE --- Product Brief

HDMI2.0 1-In 2-Out Splitter

1. Features

z HDMI2.0 Receiver
- ƒ Compliant with HDMI2.0b, HDMI1.4 and DVI1.0
- ƒ Compliant with HDCP2.3, HDCP2.2 and HDCP1.4
- ƒ Data rate up to 6Gbps
- ƒ Support 4Kx2K@60Hz
- ƒ Adaptive receiver equalization
- ƒ Support data channel swap(arbitrarily) and polarity inversion(independent)
- ƒ AC and DC couple capable
- ƒ Support 3D and HDR
- ƒ Support 8/10/12-bit color depth
- ƒ Support TMDS descrambling for EMI/RFI reduction
- ƒ Support SCDC and CEC2.0
- ƒ Integrated EDID shadow
- ƒ 5V tolerance DDC/HPD I/Os

z HDMI2.0 Transmitter
- ƒ Compliant with HDMI2.0b, HDMI1.4 and DVI1.0
- ƒ Compliant with HDCP2.3, HDCP2.2 and HDCP1.4
- ƒ Data rate up to 6Gbps
- ƒ Support 4Kx2K@60Hz
- ƒ Programmable transmitter swing and pre-emphasis
- ƒ Support channel swap(arbitrarily) and polarity inversion(independent)
- ƒ DC couple capable
- ƒ Downstream receiver sensing
- ƒ Support 3D and HDR
- ƒ Support 8/10/12-bit color depth
- ƒ Support TMDS scrambling for EMI/RFI reduction
- ƒ Support SCDC and CEC2.0
- ƒ 5V tolerance DDC/HPD I/Os

z Digital Audio Output
- ƒ Up to four I2S interface supporting 8-channel audio, with sample rates of 32~192 kHz and sample sizes of 16~24 bits
- ƒ SPDIF interface supporting PCM, Dolby Digital, DTS digital audio at up to 192kHz frame rate
- ƒ IEC60958 or IEC61937 compatible

z Miscellaneous
- ƒ Internal rterm calibration
- ƒ External crystal supports 25MHz
- ƒ Integrated microprocessor
- ƒ Integrated SPI master
- ƒ Embedded SPI flash for firmware and HDCP keys
- ƒ Integrated 100/400kHz I2C slave for debug and firmware update
- ƒ 1.2V core power supply & 3.3V I/O power supply
- ƒ -40°C to +85°C ambient operating temperature range
- ƒ 76-pin 9x9mm QFN package

2. General Description

The Lontium LT86102UXE HDMI2.0 Splitter features a 1:2 splitter compliant with HDMI2.0/1.4 specification, max 6Gbps high speed data rate, adaptive equalization RX input and pre-emphasized TX output to support long cable application, internal TX lane swap for flexible PCB routing.

LT86102UXE HDMI2.0 Splitter automatically detect the cable loss, and adaptively optimize the equalization setting .The CDR cleans the input data jitter, make it suitable for long cable and cascade application. It support RX termination resistor calibration to further improve signal integrity.

LT86102UXE support DDC/SCDC compliant with HDMI2.0/ 1.4 specification. This package is QFN76 9mmx9mm. It

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