

LT8612UX --- Product Brief

HDMI2.0 to HDMI2.0 and VGA Converter with Audio

1. Features

HDMI2.0 Receiver

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

HDMI2.0 Transmitter

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

Triple-Channel Video DAC

- Compliant with VESA VSIS1.2
- Support WUXGA timing and up to 200MSPS throughput
- Support CSC(Color Space Conversion) from YCbCr 4:2:2 to YCbCr 4:4:4 and YCbCr 4:4:4 to RGB
- Only support separate SYNC
- Amplitude calibration
- R/B swappable
- Load sensing
- 5V tolerance DDC I/Os

Digital Audio Output

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

Miscellaneous

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

2. General Description

The LT8612UX is an HDMI to HDMI&VGA converter, which converts HDMI2.0 data streams to HDMI2.0 signals and

LONTIUM CONFIDENTI

