

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 HDCP2.2 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 +125°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

analog RGB signals. It also outputs 8 channel I2S and SPDIF signals which enable high quality 7.1 channel audio. LT8612UX support DDC/SCDC compliant with HDMI2.0/ 1.4 specification. This package is QFN76 9mmx9mm. It operates from -40°C to +125°C.

- Digital Signage
- PC, Laptop Mother Boards
- HDMI to VGA Dongle
- Car Entertainment System

3. Applications



Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT8612UX	-40°C to +125°C	QFN76 (9*9)	Tray

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