

LT8642UXE --- Product Brief

HDMI2.0 4-In 2-Out Matrix Switch

1. Features

● HDMI2.0 Receiver

- Compliant with HDMI2.0b, HDMI1.4 and DV11.0
- Compliant with HDCP2.3, HDCP2.2 and HDCP1.4
- Data rate up to 6Gbps
- Support up to 4Kx2K@60Hz
- Adaptive receiver equalization
- Support polarity inversion
- 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
- Support ARC
- Integrated EDID shadow
- 5V tolerance DDC/HPD I/Os

● HDMI2.0 Transmitter

- Compliant with HDMI2.0b, HDMI1.4 and DV11.0
- Compliant with HDCP2.3, HDCP2.2 and HDCP1.4
- Data rate up to 6Gbps
- Support up to 4Kx2K@60Hz
- Programmable transmitter swing and pre-emphasis
- Support channel swap
- 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
- Support ARC
- 5V tolerance DDC/HPD I/Os

● Digital Audio

- Support up to four I2S interface supporting 8-channel audio output, with sample rates of 32~192 kHz and sample sizes of 16~24 bits

- Only support one I2S interface supporting 2-channel audio input, 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
- CSC: RGB <-> YUV444 <-> YUV422<-> YUV420
- Scaler: 4Kx2K@60/50Hz to 1080P@60/50Hz (3840x21060 to 1920x1080 or 4096x2160 to 2048x1080)
- External crystal supports 25MHz
- Integrated microprocessor
- Integrated SPI master for embedded SPI flash
- 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
- 128-pin 14x14mm QFN package

2. General Description

The LT8642UXE HDMI2.0/1.4 Switch features a 4:2 switch 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.

LT8642UXE HDMI2.0/1.4 Switch automatically detects the cable loss, and adaptively optimize the equalization setting. It supports RX termination resistor calibration to further improve signal integrity.

3. Applications

- Front panel buffer for advanced television (HDTV) sets

- Standalone switcher
- Multiple input displays
- Projectors
- A/V receivers

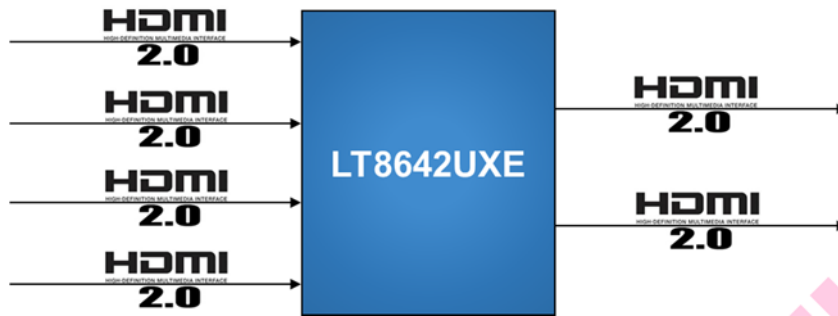


Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Product Name	Part Number	Product Status	Package	Bonding Wire	Grade	Operating Temperature Range	Stack Die Option	Packing Method	MPQ
LT8642UXE	LT8642UXE_U1Q00CED	Preview	QFN128 (14*14)Saw	Cu	Consumer	TBD	D	Tray	1190pcs

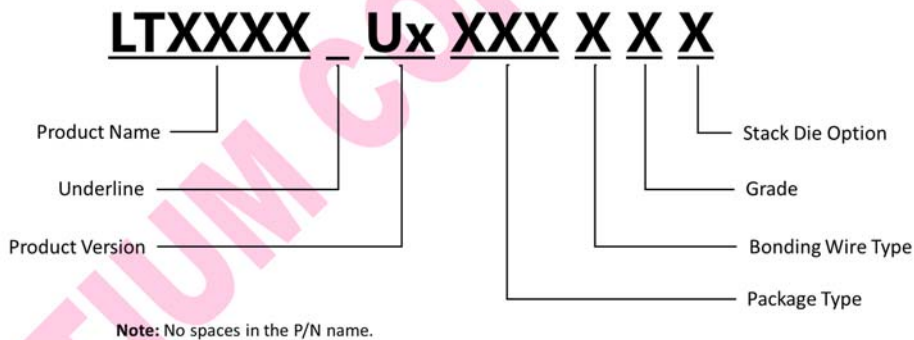


Figure 4.1 Part Number Naming Rules

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