

LT8619B--- Product Brief

HD-DVI to TTL/LVDS Converter

1. Features

- **HD-DVI Dual Mode Rx**
 - Direct interface to DVI 1.0 and HD-DVI V1.4 receiver
 - Compliance with DVI up to 1.65Gbps and HD-DVI V1.4 up to 3.0Gbps
 - Multiple pixel formats: RGB 6/8/10/12 bit per component (bpc); YCbCr 422/444 8/10/12 bpc
 - High input sensitivity, with differential input level down to 80mV
 - Receiver side equalization up to 12 dB
 - Auto Loss of Signal detection
 - High jitter tolerance up to 0.6UI
 - HDCP decryption
 - On-chip EDID
 - Support resolution up to 4Kx2K@30Hz
- **Output Interface**
 - Dual channels LVDS output ports
 - Single or double pixel mode
 - 24/48-bit panel mapping to the LVDS channels
 - 18/36-bit panel mapping to the LVDS channels
 - Programmable LVDS ports swapping
 - Programmable channel swapping
 - Support output resolution up to 1080P@60Hz for HD LCD
 - Spread-Spectrum DPLL to reduce EMI
 - Compliant with RGB888/RGB666/RGB565 TTL output
- **Scaling**
 - Fully programmable zoom ratios
 - Independent horizontal/vertical scaling
 - Advanced zoom algorithm provides high image

quality

- **Video Processing**
 - Programmable hue and saturation adjustment
 - brightness and contrast control
 - Programmable Color space conversion
 - Programmable gamma correction support
 - Advanced dithering logic for 18-bit panel color depth enhancement
- **Audio Support**
 - Optional SPDIF output and 8-channel I2S output
- **Other Features**
 - Support I2C slave debug mode
 - Extensive power management for power savings
 - Support total 5 GPIOs
 - Integrated pattern generation

2. General Description

The LT8619B is Lontium's high performance HD-DVI receiver chip based on ClearEdge™ Technology, compliant with the HD-DVI 1.4 specification. The RGB output ports can support RGB888/RGB666/RGB565 format and the output resolution can support up to 4Kx2K resolution. With programmable scalar, LT8619B can do scaling up and down within 1080P 60Hz resolution. LT8619B integrates MCU and it has 10 GPIOs. For easy implementation of a multi-media system, LT8619B supports 8-channel high quality I2S audio or SPDIF audio output. It integrates 4M bits nor-flash inside (option), and also you can use external nor-flash by SPI interface for compatibility.

3. Applications

- Car Entertainment
- TV, Monitor
- Pico Projector
- Smart Projector

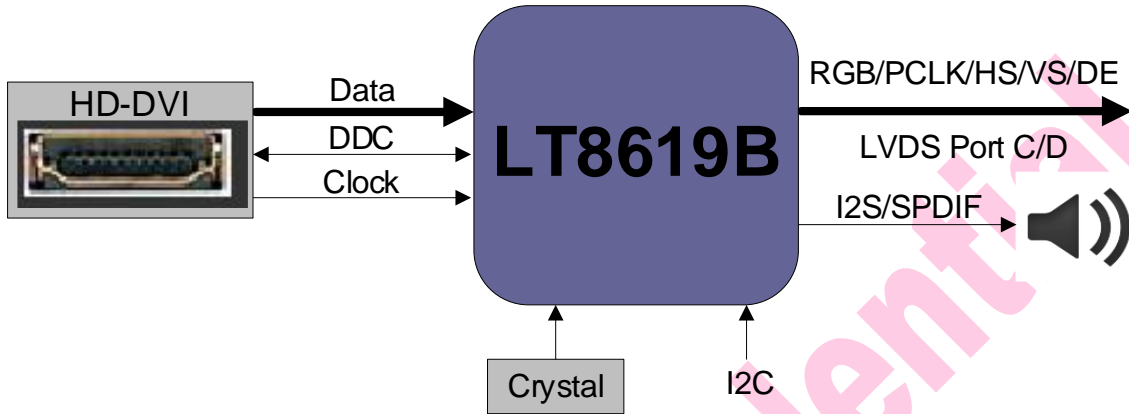


Figure 3.1 Application Diagram

4. Ordering Information

Table 4.1 Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method
LT8619B	-40°C to +85°C	QFN76(9*9)	Tray

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