LT86104SXE --- Product Brief
HDMI1.4 & DVI1.0 1:4 Splitter

1. Features

- HDMI 1.4/&DVI 1.0 specifications compliant
- Support 3D video formats and 4Kx2K extended resolution formats up to 3.4Gbps data rate and 4Kx2K @60Hz YCbCr 4:2:0 format
- Adaptive equalization and de-emphasis to compensate long cable losses
- ODTs and calibration
- Integrated HDCP repeater engine compliant with HDCP 1.4 specification
- Fully hardware-controlled or optional software-controlled HDCP operations
- Pre-programmed HDCP key sets or external EEPROM stored key sets
- Integrated CEC controller
- Integrated EDID shadow RAM and embedded EDID
- 5V-tolerant DDC interfaces
- 1 HDMI/DVI input port, up to 4 HDMI/DVI output ports

2. General Description

The LT86104SXE is Lontium's 4rd generation 4-port HDMI/DVI splitter which can repeat one HDMI/DVI signal to 4 HDMI/DVI signal sets, support up to 4 different HDMI/DVI receiving/display terminals. Based on ClearEdge™ technology,

it supports up to 3.4Gbps data rate per channel, compliant with the HDMI 1.4&DVI 1.0 specifications.

The device incorporates a pair of ODTs, an adaptive equalizer and a CDR circuit on each data channel of receiver side, and a de-emphasis driver with optional back terminations on each data channel of transmitter side. The clock channel feeds a high-performance PLL that regenerates a low jitter output clock for data recovery. The LT86104SXE process HDCP decryption/encryption and transmits the data to 4 HDMI/DVI ports.

The HDCP repeater engine in LT86104SXE handles all the processing required by authentication, decryption and encryption in hardware. This greatly reduces the external MCU overhead and firmware complexity. However, for more flexibility, the LT86104SXE also provides an option of software-controlled mode in which HDCP operations are entirely controlled by external MCU.

The LT86104SXE integrates EDID shadow RAM for better compatibility and reduced system complexity. Embedded EDID is accessible to the upstream port before the real EDID is loaded by the external MCU.

3. Applications

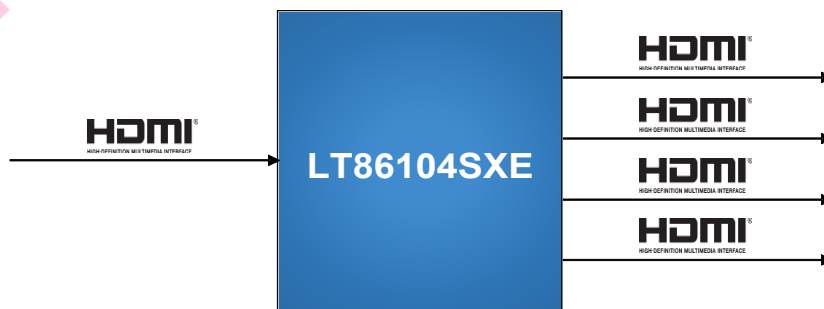- Multiple display/TV support
- HDMI/DVI signal splitting/repeating

Figure 3.1   Application Diagram

4. Ordering Information

Table 4.1   Ordering Information

Part Number	Operating Temperature Range	Package	Packing Method	MPQ
LT86104SXE	-40℃ to +85℃	LQFP128 (14*20)	Tray	720pcs

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