LT86101X --- Product Brief

HDMI1.4/2.0 Re-driver and DP++ to HDMI Level Shifter

1. Features

- Compliant to HDMI1.4b /2.0 Standard for Both Input and Output
- Support Dual-mode DisplayPort Standard for Input
- Support up to 6Gb/s Data Rates
- Integrate DDC Interception
- Programmable Input Equalization
- Programmable Output Swing and De-emphasis
- Support Only AC Coupled Interface
- Internal MCU and Flash for Online Firmware Upgrade
- Support External I2C Debug
- 1.8V/3.3V Power Supply
- Packaged in 5mmx5mm QFN40

2. General Description

LT86101X is a deeply-optimized HDMI re-driver and DP++ to HDMI level shifter IC that enhances TMDS signal quality by performing cable or board trace loss compensation. LT86101X can be configured to work under HDMI1.4b with up to 3.4Gb/s data rate or HDMI2.0 standard with maximum 6Gb/s data rate to allow for the highest resolutions of 4Kx2K 60Hz or 1080P with higher refresh rates.

The input receiver of LT86101X features a multi-level programmable linear equalizer that can support maximum 25dB loss compensation due to Inter-Symbol Interference (ISI). The output transmitter re-drives the received signal with multi-level programmable output swing and up to 6dB de-emphasis.

The Build-in DDC interception function, co-working with an accurate frequency detect on clock channel is also included to automatically setup re-driver parameters.

LT86101X internally integrates an 8-bit OCM and SPI flash memory (stacked die) to run program. Online software upgrade is also supported for LT86101X.

LT86101X is fabricated in advanced CMOS process and implemented in a small outline 5mmx5mm QFN40 package. This package is RoHS compliant and specified to operate from -40°C to +85°C.

3. Applications

- Digital TV and Blu-ray DVD Player
- Digital Projector and LCD Display
- PC, Notebook and All-in-Ones Computer
- Home Entertainment System
- HDMI Cable Extender

4. Ordering Information

Table 4.1.1 Ordering Information

Part No.	Operating Temp. Range	Package	Packing
LT86101X	-40℃ to +85℃	QFN40 (5*5)	Tray

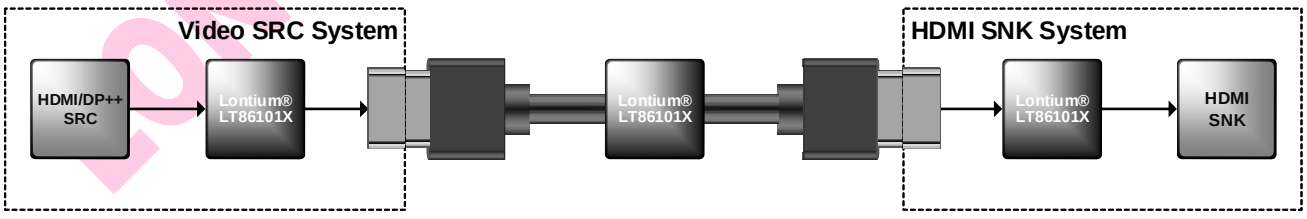

Figure 1. LT86101X Typical Application Diagram

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