HDMI 1.4 Transmitter IP Core

Analogix offers its silicon-proven HDMI IP cores (digital plus analog PHY) for integration into customer's system-on-chip products to reduce overall BOM costs while consuming less board space than discrete HDMI chip solutions. HDMI 1.4 transmitter IP core is ideal for DVD, Blu-Ray Disc players, set-top boxes, A/V receivers. The IP core provides full support for HDCP 1.3 encryption. It also contains the Built-In Self Test (BIST) function.

Analogix HDMI 1.4 Transmitter IP core (digital plus analog PHY) contains an advanced audio interface and a flexible video interface. It supports all relevant formats for compressed and lossless audio by flexible S/PDIF, I2S and one bit audio interfaces. Its video interface provides Deep Color support up to 36 bits-per-pixel. Integrated color space conversion allows direct connection to all major DVD and set-top box MPEG decoders.

Applications

- DVD Players and Recorders
- Blu-Ray Disc Players
- Portable Media Players
- Personal Video Recorders
- Digital Set-Top Boxes
- A/V Receivers
- Game Systems
- Mobile Internet Devices and UMPC

Related IP Cores

- HDMI 1.2/1.3/1.4 Transmitter/Receiver
- DisplayPort^{TM} Transmitter
- SERDES (6.25Gbps or less)
- Ethernet PHY

Typical Application Diagram

ASIC System-on-chip
with Integrated HDMI Transmitter IP Core

Features

Highlights

- HDMI 1.4/DVI 1.0 Compliant
- Optional HDCP 1.2 Decryption Engine
- EIA/CEA-861 video timing
- TMDS clock rate up to 340MHz
- Programmable power management
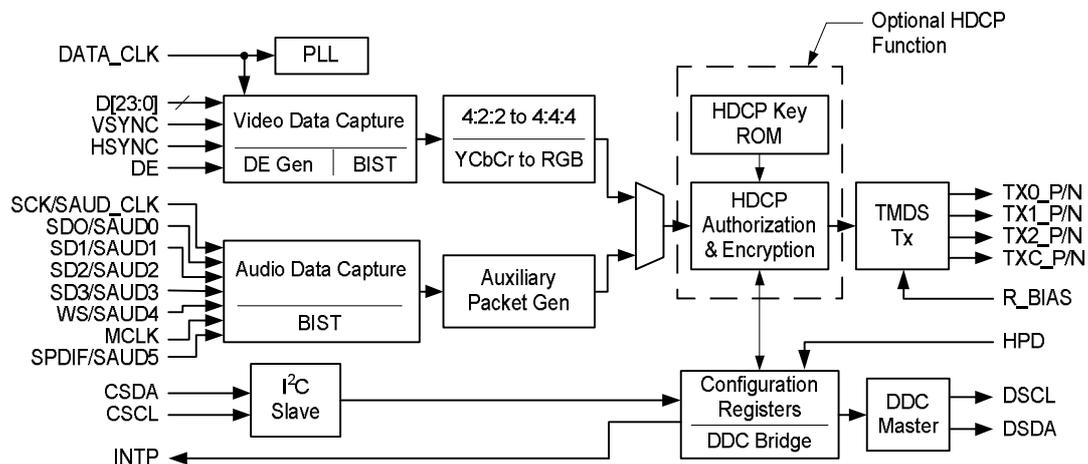
Video Interface

- Supports DVD and HD MPEG decoders
- 24/30/36/48-bit pixel video modes support at SDR (Single clock edge) and DDR (Dual Clock Edge)
- YCbCr-to-RGB Color space conversion
- Backward compatible with DVI 1.1

- Programmable output swing and pre-emphasis
- Built-in Self Test (BIST)

Digital Audio Interface

- 8-channel I2S support Dolby Digital, and DVD-Audio
- S/PDIF supports PCM, Dolby Digital, DTS digital audio transmission
- Up to 8 channels 1-bit super audio support
- Programmable I2S channel mapping
- 2:1 and 4:1 down-sampling to handle 96 KHz and 192 KHz audio stream
- IEC60958 or IEC61937 compatible

Block Diagram

Worldwide Locations

Analogix is positioned to support customers worldwide with headquarters in Santa Clara, CA and design engineering and product support in Beijing, China. Analogix also has sales support offices in Taiwan and Japan. For more information: www.analogix.com.