



Quad HDMI 1.4 Fast Switching Receiver with 12-Bit, 170 MHz Video and Graphics Digitizer and 3D Comb Filter Decoder

ADV7844

FEATURES

- Quad HDMI 1.4 fast switching receiver
- 170 MHz video and graphics digitizer
- 3D comb filter video decoder
- SCART fast blank support
- Adaptive HDMI equalizer
- Integrated CEC controller
- HDMI repeater support
- Advanced VBI data slicer
- 4:1 HDMI 1.4 225 MHz receiver
 - Xpressview™ fast switching of HDMI ports
 - 2 ARC interfaces for ARC support
 - SPDIF interface for ARC support
- 3D video format support, including frame packing 1080p
 - 24 Hz, 720p 50 Hz, 720p 60 Hz
- Full colorimetry support including sYCC601, Adobe RGB, Adobe YCC 601
- 36-/30-bit Deep Color and 24-bit color support
- HDCP 1.4 support with internal HDCP keys
- 5 V detect and hot plug assert for each HDMI port
- HDMI audio support including HBR and DSD
- Advanced audio mute feature
- Flexible digital audio output interfaces
- Supports up to 5 S/PDIF outputs
- Supports up to 4 I²S outputs
- Video and graphics digitizer
 - Four 170 MHz, 12-bit ADCs
 - 12-channel analog input mux
 - 525i-/625i-component analog input
 - 525p-/625p-component progressive scan support
 - 720p-/1080i-/1080p-component HDTV support
 - Low refresh rates (24/25/30 Hz) support for 720p/1080p
 - Digitizes RGB graphics up to 1600 × 1200 at 60 Hz (UXGA)
- 3D video decoder
 - NTSC/PAL/SECAM color standards support
 - NTSC/PAL 2D/3D motion detecting comb filter
 - Advanced time-base correction (TBC) with frame synchronization
 - Interlaced-to-progressive conversion for 525i and 625i
 - IF compensation filters
 - Vertical peaking and horizontal peaking filters
 - Robust synchronization extraction for poor video source

General

- Highly flexible 36-bit pixel output interface
- Internal EDID RAM for HDMI and graphics
- Dual STDI (standard identification) function support
- Any-to-any, 3 × 3 color space conversion (CSC) matrix
- 2 programmable interrupt request output pins
- Simultaneous analog processing and HDMI monitoring

APPLICATIONS

- Advanced TVs
 - PDP HDTVs
 - LCD TVs (HDTV ready)
 - LCD/DLP® rear projection HDTVs
 - CRT HDTVs
 - LCoS™ HDTVs
- AVR video receivers
- LCD/DLP front projectors
- HDTV STBs with PVR
- Projectors

FUNCTIONAL BLOCK DIAGRAM

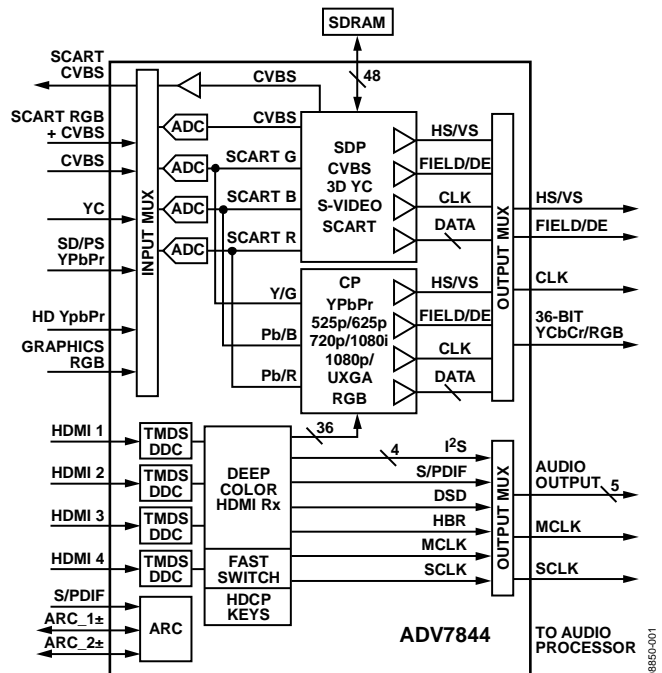


Figure 1.

For more information on the ADV7844, email Analog Devices, Inc., at ATV_VIDEORX_Apps@analog.com.



Rev. Sp0

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700 www.analog.com
Fax: 781.461.3113 ©2010 Analog Devices, Inc. All rights reserved.

ADV7844

NOTES