



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

ADV7842

FEATURES

Dual 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
256-ball, 17 mm × 17 mm BGA package
2:1 HDMI 1.4 225 MHz receiver
Xpressview™ fast switching of HDMI ports
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 Hz/25 Hz/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

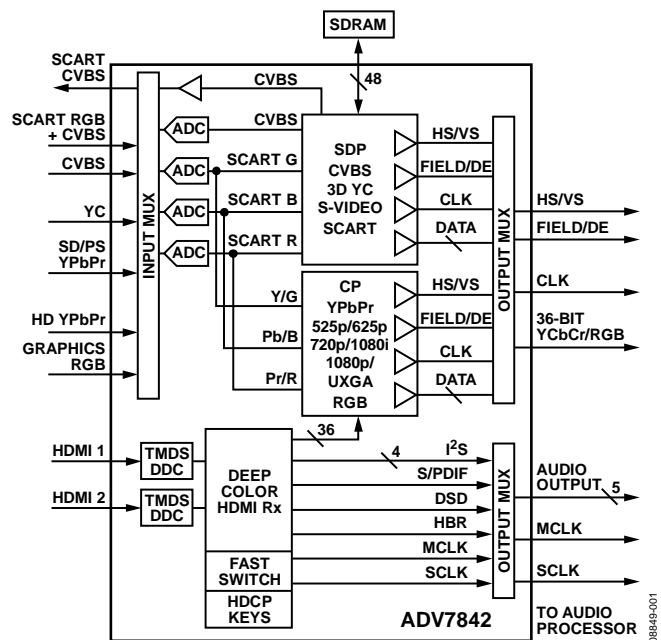


Figure 1.

For more information on the ADV7842, email Analog Devices, Inc., at ATV_VIDEORX_Apps@analog.com.

Advantiv
Advanced Television Solutions
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Xpressview
Fast Switching Technology
by Analog Devices

Rev. Sp0

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