

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 imes 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

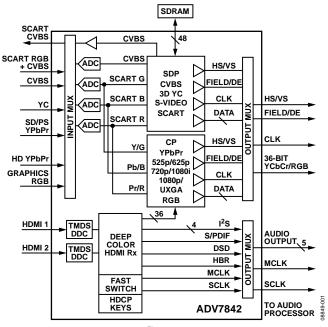


Figure 1.

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



Xpressview

Fast Switching Technology by Analog Devices

Rev. Sp0

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