



ANALOG DEVICES

12-Bit Deep Color Quad HDMI 1.3 Receiver

ADV7614

FEATURES

Ultralow jitter digital PLL

Quad HDMI Rx

4:1 multiplexed HDMI receiver

HDMI 1.3, DVI 1.0

225 MHz HDMI receiver

HDMI repeater support

High-bandwidth digital content protection (HDCP 1.3)

36-/30-/24-bit Deep Color support

HDMI 1.3-compatible audio interface

Programmable/adaptive equalizer for cable lengths up to
30 meters

Internal EDID RAM

EDID with HDMI cable power support

CEC support

Audio support

S/PDIF (IEC90658-compatible) digital audio output

Super audio CD (SACD) with DSD output interface

Compressed SACD with DST output interface

High bit rate (HBR) audio

Dolby TrueHD

DTS-HD master audio

DTS-HD high resolution audio

On-board audio mute controller

General

Highly flexible output interface

12-/10-/8-bit 4:4:4 or 12-/10-/8-bit 4:2:2 pixel output interface

STDI function support standard identification

Any-to-any 3 × 3 color space conversion matrixes

Free-run time generator

2 programmable interrupt request output pins

Color controls

Low standby power

APPLICATIONS

Advanced TVs

AVR video receivers

PDP HDTVs

LCD TVs (HDTV ready)

OLED HDTVs

LCD/DLP front projectors

HDMI switchers

GENERAL DESCRIPTION

The ADV7614 is a high quality, single-chip integrated 4:1 multiplexed High-Definition Multimedia Interface (HDMI™) receiver.

The ADV7614 incorporates a quad input HDMI 1.3-compatible receiver that supports all HDTV formats up to 1080p and displays resolutions up to UXGA (1600 × 1200 at 60 Hz). The reception of encrypted video is possible with the inclusion of HDCP. The HDMI receiver also includes programmable/adaptive equalization that ensures robust operation of the interface with cable lengths up to 30 meters.

The ADV7614 provides complete audio support for eight channels of I²S audio, Sony/Philips digital interface format (S/PDIF) digital audio output, and super audio CD (SACD) and compressed SACD support with direct stream digital (DSD) and direct stream transfer (DST) output interfaces, respectively. The HDMI receiver also supports high bit rate (HBR) audio streaming to allow recovery (and downstream processing) of compressed lossless audio formats, including Dolby® TrueHD and DTS®-HD master audio or DTS-HD high resolution audio. In addition, it also provides an advanced audio functionality, such as a mute controller that prevents audible extraneous noise in the audio output.

Fabricated in an advanced CMOS process, the ADV7614 is provided in a space-saving, 260-ball 15 mm × 15 mm CSP_BGA surface-mount, RoHS-compliant package, and is specified over the -40°C to +70°C temperature range.

For more information on the ADV7614, contact a local Analog Devices, Inc., sales office or email ATV_VIDEORX_INFO@analog.com.

Advantiv
Advanced Television Solutions
by Analog Devices

NSV
Precision Video
by Analog Devices

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 ©2009 Analog Devices, Inc. All rights reserved.

ADV7614

NOTES