



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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FEATURES

General

- Incorporates HDMI (v.1.3 with Deep Color, x.v.Color)
- 225 MHz supports 12-bit Deep Color operation in all video formats up to 1080p
- Supports Gamut Metadata Packet transmission
- Integrated CEC buffer/controller
- Compatible with DVI v.1.0, and HDCP v.1.3
- Video/audio inputs accept logic levels from 1.8 V to 3.3 V

Digital video

- Programmable two-way color space converter
- Supports RGB, YCbCr, and DDR
- Supports ITU656-based embedded syncs
- Auto input video format timing detection (CEA-861-D)

Digital audio

- Supports standard S/PDIF for stereo LPCM or compressed audio up to 192 kHz
- 8-channel uncompressed LPCM I²S audio up to 192 kHz

Special features for easy system design

- On-chip MPU with I²C master to perform HDCP operations and EDID reading operations
- 5 V tolerant I²C and HPD I/Os, no extra device needed
- No audio master clock needed for supporting S/PDIF and I²S
- On-chip MPU reports HDMI events through interrupts and registers

GENERAL DESCRIPTION

The ADV7510 is a 225 MHz High Definition Multimedia Interface (HDMI™) transmitter, which is ideal for home entertainment products including DVD players/recorders, digital set top boxes, A/V receivers, gaming consoles, and PCs.

The digital video interface contains an HDMI and a DVI v.1.0-compatible transmitter, and supports all HDTV formats (including 1080p with 12-bit Deep Color). The ADV7510 also supports x.v.Color™, high bit rate audio, digital theater sound (DTS), and programmable AVI InfoFrames features.

For more information about the ADV7510, email: flatpanel_apps@analog.com.

Rev. SpA

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FUNCTIONAL BLOCK DIAGRAM

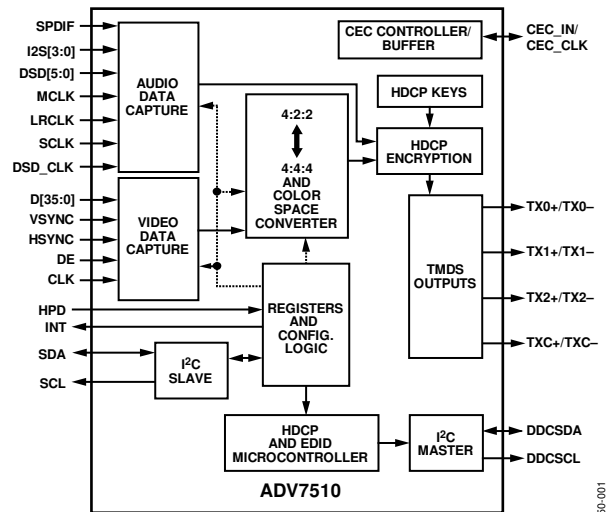


Figure 1.

With the inclusion of HDCP, the ADV7510 allows the secure transmission of protected content as specified by the HDCP v.1.3 protocol.

The ADV7510 supports both S/PDIF and 8-channel I²S audio. Its high fidelity 8-channel I²S can transmit either stereo or 7.1 surround audio up to 768 kHz. The S/PDIF can carry compressed audio including Dolby® Digital, DTS®, and THX®.

Fabricated in an advanced CMOS process, the ADV7510 is provided in a 100-lead LQFP surface-mount plastic package and is specified over the 0°C to +85°C temperature range.

ADV7510* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

EVALUATION KITS

- ADV7510 Evaluation Board

DOCUMENTATION

Application Notes

- AN-1050: A Method for Compressing I²C Scripts for the ADV74xx/ADV75xx/ADV76xx/ADV78xx

Data Sheet

- ADV7510: Deep Color HDMI 1.3 Transmitter with CEC Data Sheet

REFERENCE MATERIALS

Informational

- Advantiv™ Advanced TV Solutions

Technical Articles

- Analysis of Common Failures of HDMI CT
- Designing HDTVs with CEC to Energy Star 3.0

DESIGN RESOURCES

- ADV7510 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all ADV7510 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

DOCUMENT FEEDBACK

Submit feedback for this data sheet.

ADV7510

NOTES

I²C refers to a communications protocol originally developed by Philips Semiconductors (now NXP Semiconductors).

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