

FEATURES

General

- Low power HDMI/DVI transmitter ideal for portable applications
- CEC controller and expanded message buffer (3 messages) reduces system overhead
- Incorporates HDMI 1.3 (x.v.Color) technology
- Compatible with DVI 1.0
- Optional embedded HDCP keys to support HDCP 1.3
- 1.8 V and 1.2 V supplies for ultralow operating power
- Video/audio inputs accept logic levels from 1.8 V to 3.3 V

Digital video

- 80 MHz operation supports all video and graphics resolutions from 480i to 1080i
- Programmable 2-way color-space converter
- Supports RGB, YCbCr, and DDR
- Supports ITU656-based embedded syncs
- Automatic input video format timing detection (CEA-861-E)

Digital audio

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

Special features for easy system design

- On-chip MPU with I²C master to perform EDID reading and HDCP operations; reports HDMI events through interrupts and registers
- 5 V tolerant I²C and HPD I/Os, no extra device needed
- No audio master clock needed for supporting S/PDIF and I²S
- Compatible with [AD9394](#) HDMI companion chip 5 V generator for Hot Plug detection in portable applications

APPLICATIONS

Cellular handsets
 Digital video cameras
 Digital still cameras
 Personal media players
 Gaming
 DVD players and recorders
 Digital set-top boxes
 HDMI repeater

GENERAL DESCRIPTION

The [ADV7523A](#) is an 80 MHz, High-Definition Multimedia Interface (HDMI™) transmitter with expanded CEC buffer. It supports HDTV formats up to 1080i and computer graphic resolutions up to XGA at 75 Hz.

For more information about the [ADV7523A](#), email: ATV_VideoTx_Apps@analog.com.

Rev. SpB

Document Feedback

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.

FUNCTIONAL BLOCK DIAGRAM

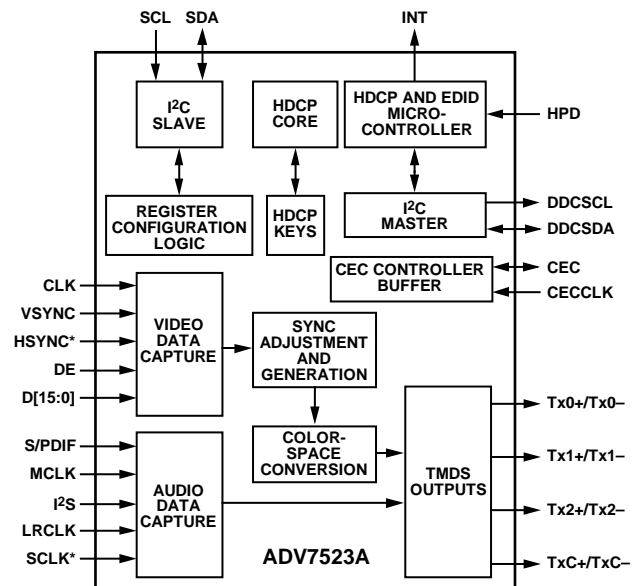


Figure 1.

With the optional inclusion of embedded HDCP keys, the [ADV7523A](#) allows the secure transmission of protected content, as specified by the HDCP 1.3 protocol.

The [ADV7523A](#) supports x.v.Color™ (gamut metadata) for a wider color gamut.

The [ADV7523A](#) supports both S/PDIF and 2-channel I²S audio. Its high fidelity, 2-channel I²S audio can transmit stereo up to a 192 kHz sampling rate. S/PDIF can carry stereo LPCM audio or compressed audio, including Dolby® digital and DTS®.

The [ADV7523A](#) helps to reduce system design complexity and cost by incorporating such features as an I²C master for EDID reading, and 5 V tolerance on the I²C and Hot Plug™ detect pins.

Fabricated in an advanced CMOS process, the [ADV7523A](#) is available in a space saving, 49-ball, WLCSP surface-mount package. This package is RoHS compliant and specified to operate from -25°C to +85°C.

ADV7523A* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

EVALUATION KITS

- ADV7532A Evaluation Board

DOCUMENTATION

Data Sheet

- ADV7523A: Low Power HDMI/DVI Transmitter with Consumer Electronics Control (CEC) Data Sheet

REFERENCE MATERIALS

Informational

- Advantiv™ Advanced TV Solutions

DESIGN RESOURCES

- ADV7523A Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all ADV7523A 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.

NOTES

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