



查询"ADV7523A"供应商

Low Power HDMI/DVI Transmitter with Consumer Electronics Control (CEC)

ADV7523A

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-F)

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

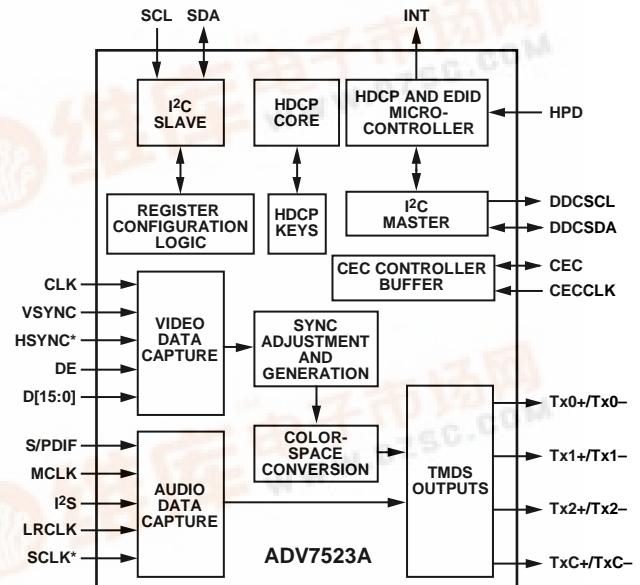
APPLICATIONS

- 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.

FUNCTIONAL BLOCK DIAGRAM



*BOTH HSYNC AND SCI K CAN BE CONFIGURED AS MCI K.

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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 $+85^{\circ}\text{C}$.

Rev. Sp0

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NOTES

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

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