



## NXP 4-input HDMI 1.4a receiver TDA19978A

# Enhance your connectivity Provide 3D interface to HD systems

Ready for 3D and Deep Color, this advanced receiver supports fast, simple, robust integration in STBs, A/V recorders, video devices, and repeaters. It meets requirements for HDCP and HDMI certification.

### Key features

- ▶ Video: up to 1080p at 60Hz TV format and UXGA (1600x 1200) at 60 Hz PC format Deep Color video processing
- ▶ Audio: up to 8 channels 192 KHz
- ▶ 4 independent HDMI inputs with high-performance, auto-adaptive equalizer
- ▶ 3D side-by-side, top-bottom and frame-packing
- ▶ Embedded EDID memory
- ▶ User-friendly, high-level software driver
- ▶ Multilevel power management
- ▶ HDMI/HDCP certified solution
- ▶ HDCP 1.4 engine with embedded keys

### Key applications

- ▶ HDMI Hub for set-top boxes and audio-video recorders
- ▶ HDTV
- ▶ Home theaters
- ▶ Docking stations
- ▶ Videoconferencing systems
- ▶ Video projectors

### Key benefits

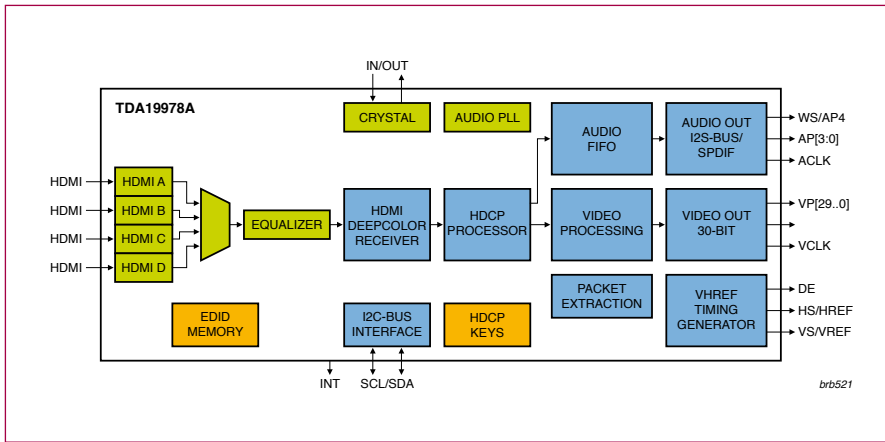
- ▶ HDMI 1.3 and 1.4a options:
  - Enlarged gamut boundary using xvYCC color space
  - Deep Color processing up to 36 bits
  - High Bit Rate (HBR) and Direct Stream Transport (DST) audio path
  - ARC compatible
- ▶ Optimized pin-count with H1QFP144 package
- ▶ NXP Authorized Test center for optimized HDCP, CEC and HDMI certification
- ▶ Superior audio stream quality with NXP patent: very high-precision frequency tracking with external reference
- ▶ Video processing: YCbCr/RGB color matrix, derepeater, upsampler, ITU656 formatter

### Best-in-class solution for audio extraction

The TDA19978A is available as part of a complete chipset with TDA9984 and CEC translator. The chipset enables low-cost upscaling solution that delivers a superior-quality audio stream, including support for High Bit Rate (HBR) formats such as DTS-HD™ and Dolby TrueHD™



## TDA19978A block diagram



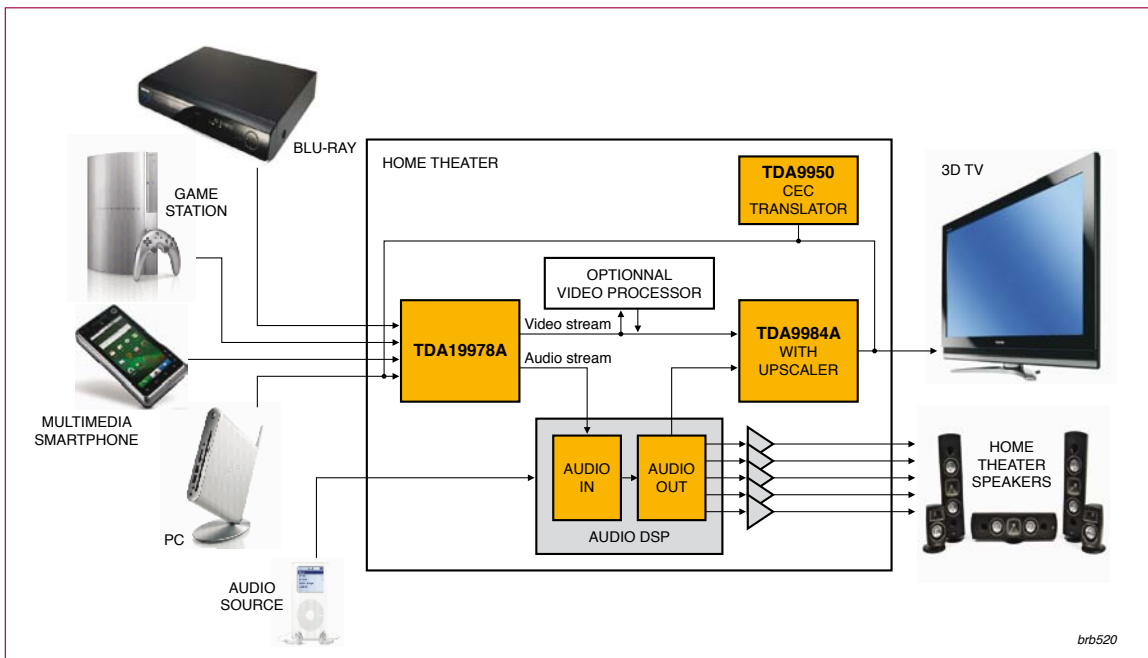
## Software system integration

- ▶ Full software support
- ▶ Multi-core (MIPS, SPARC, ARM) and multi-OS compliant (even without OS)
- ▶ User-friendly, high-level drivers
- ▶ OpenSource driver also provided for Linux Kernel 2.6.29

## Example of optimized extraction solution for a high-end audio/video amplifier

- ▶ TDA19978A: High-performance 4-input Deep Color HDMI 1.4a 3D receiver with high-precision audio management
- ▶ TDA9984: HDMI 1.4a transmitter with video upscaling - HBR, OBA and DST audio management
- ▶ TDA9950: CEC translator
- ▶ Integrated software application for HDMI receiver, transmitter and CEC management
- ▶ HDMI and HDCP certified

## Example of use in home theater application



# HDMI

[www.nxp.com](http://www.nxp.com)

© 2010 NXP Semiconductors N.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

Date of release: December 2010

Document order number: 9397 750 16975

Printed in the Netherlands

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[NXP:](#)

[TDA19978AHV/15C185](#) [TDA19978AHV15C185](#), [TDA19978AHV15C185:](#)