



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

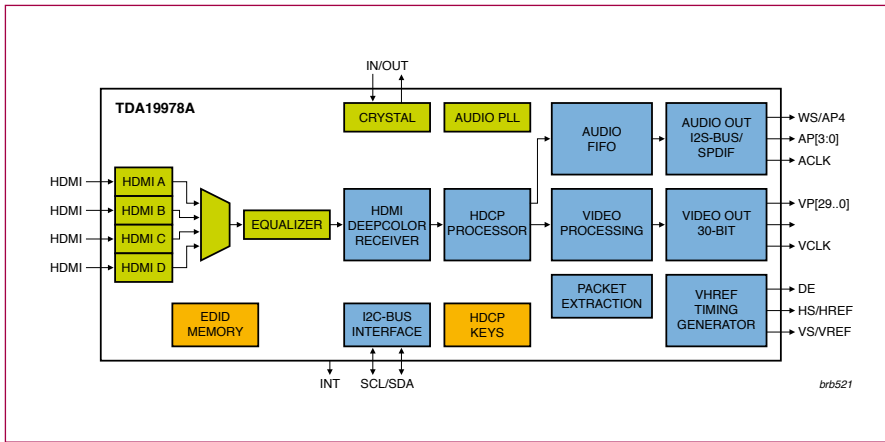
- ▶ HDMI 1.3 and 1.4a options:
 - Enlarged gamut boundary using xvYCC color space
 - Deep Color processing up to 36 bits
 - High Bit Rate (HBR) and Direct Stream Transport (DST) audio path
 - ARC compatible
- ▶ Optimized pin-count with HLQFP144 package
- ▶ NXP Authorized Test center for optimized HDCP, 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



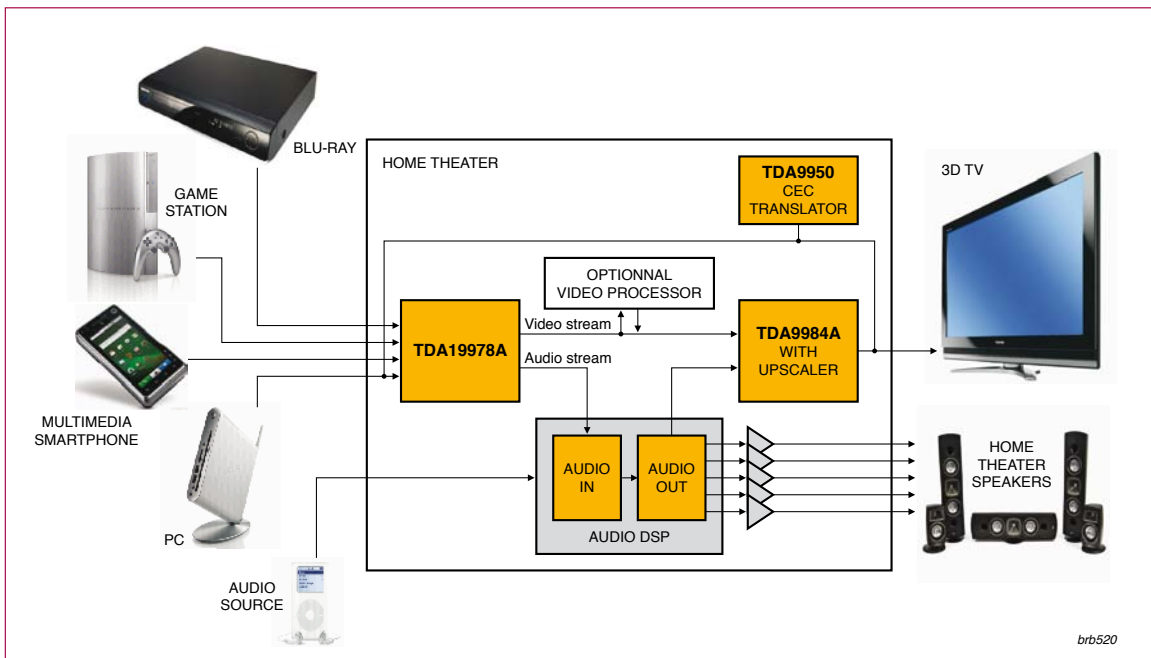
Software system integration

- ▶ 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

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