



## NXP HDMI transmitters TDA9981, TDA9983 and TDA9984

# Move to a higher definition with TDA998x HDMI transmitters

Keep ahead of increasing performance requirements set by the TV market with our TDA998x HDMI transmitter family. The solutions help DVD-P, DVD-R, DVR, STB and A/V receiver system providers to meet today's high performance standards, while improving overall system cost.

All the devices in the family are pin-to-pin and software compatible. They enable full high definition and HDMI for market segments previously locked to standard definition and analog interfacing.

### Key features

- ▶ Embedded de-interlacer and up-scaler enable full HD 1080p output from standard definition inputs (no need for external components)
- ▶ HDCP support (no need for external memory)
- ▶ 250 MHz to 1.65 GHz TMDS transmitter operation
- ▶ RGB, YCbCr, and DDR support
- ▶ 8b 4:4:4 RGB and 12b YUV 4:2:2 color depth
- ▶ ITU656-based embedded syncs support
- ▶ Flexible video input port setting
- ▶ Dolby-True HD and DTS-HD high bit rate audio support using the HBR interface
- ▶ 4 I<sup>2</sup>S-bus audio input channels, 1 S/PDIF channel and 8 DSD channels
- ▶ Audio data rate up to 192 kHz per input for both standards
- ▶ On-chip MPU with I<sup>2</sup>C master to perform HDCP operations and EDID reading operations
- ▶ Pin to pin and SW compatible product family
- ▶ QFP80 and 6 x 6 BGA packages

### Applications

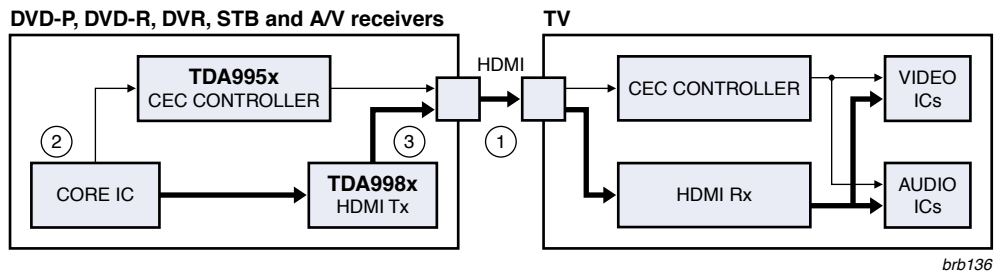
- ▶ A/V receivers
- ▶ D-VHS players
- ▶ Digital STBs
- ▶ DVD players / recorders
- ▶ DVRs

### Key benefits

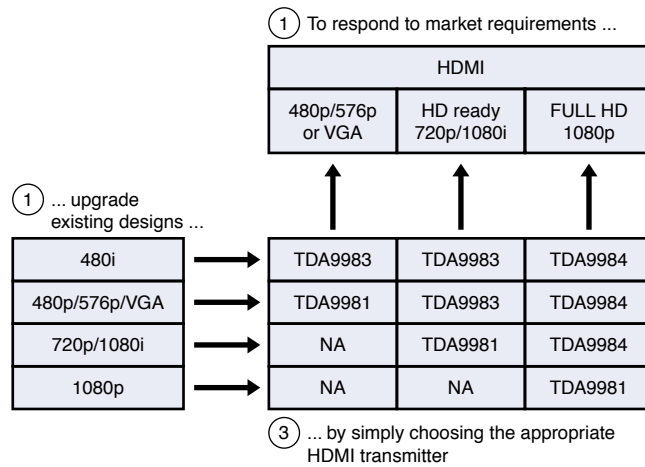
- ▶ Scalable solution from pass-through to embedded HD and Full HD upscaling
- ▶ Optimized development cost
- ▶ Fast time to market
- ▶ Optimized system architecture to enable HDMI with reduced impact on existing design and BOM
- ▶ CEC solutions to follow market trend
- ▶ Authorized Test Center, allowing HDMI v1.3, HDCP v1.2 and CEC certification

## Full software support

- ▶ User friendly high level drivers
- ▶ Low level access for fine tuning
- ▶ Multi-core compliant (MIPS, SPARC, ARM, ...)
- ▶ Multi-OS compliant (even without OS)
- ▶ HDMI, HDCP and CEC certification compliant



Architecture example



Selection table

## Consumer Electronics Control (CEC)

An optional function of the HDMI specification, the CEC protocol provides a number of recommended features that enhance the functionality and interoperability of devices connected via HDMI.

## Authorized Test Center (ATC)

Our ATC laboratory in Caen, France allows devices to be qualified and certified following HDMI CTS (Compliance Test Specification) 1.3b.

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