



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 I²S-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 I²C 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

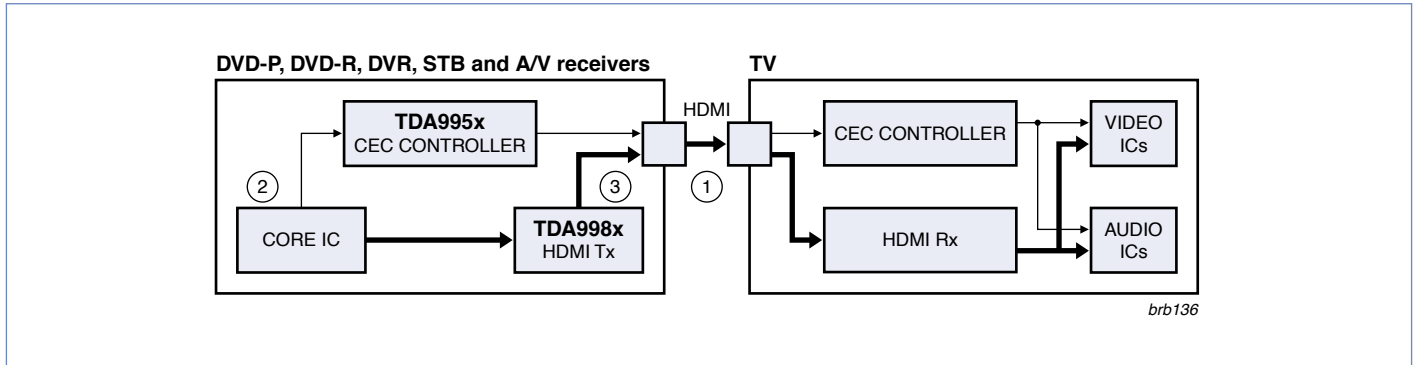
- ▶ A/V receivers
- ▶ D-VHS players
- ▶ Digital STBs
- ▶ DVD players / recorders
- ▶ DVRs

Key benefits

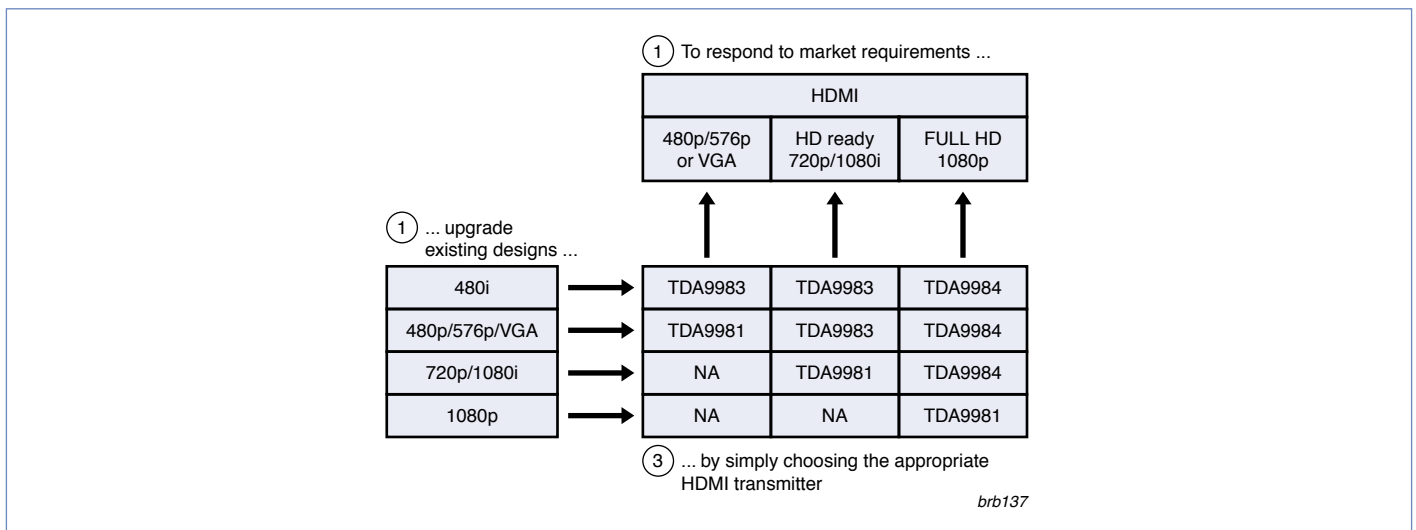
- ▶ Scalable solution from pass-through to embedded HD and Full HD upscaling
- ▶ Optimized development cost
- ▶ Fast time to market
- ▶ Optimized system architecture to enable HDMI with reduced impact on existing design and BOM
- ▶ CEC solutions to follow market trend
- ▶ Authorized Test Center, allowing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