



## NXP HDMI 1.3a smart switch TDA999x family

# More digital-TV content and better picture quality – anytime, anywhere

NXP's smart 1.3a-compliant HDMI switches let you connect multiple HDMI inputs to receive more digital content with a better picture quality on your TV (12-bit Deep Color support). The unique NXP architecture integrates auto-adaptive equalizers enabling the use of longer cables for TV connection anywhere in the home.

The TDA9996 has four inputs, while the TDA9995 has three. The TDA9993 is a 1-to-1 buffer.

### Features

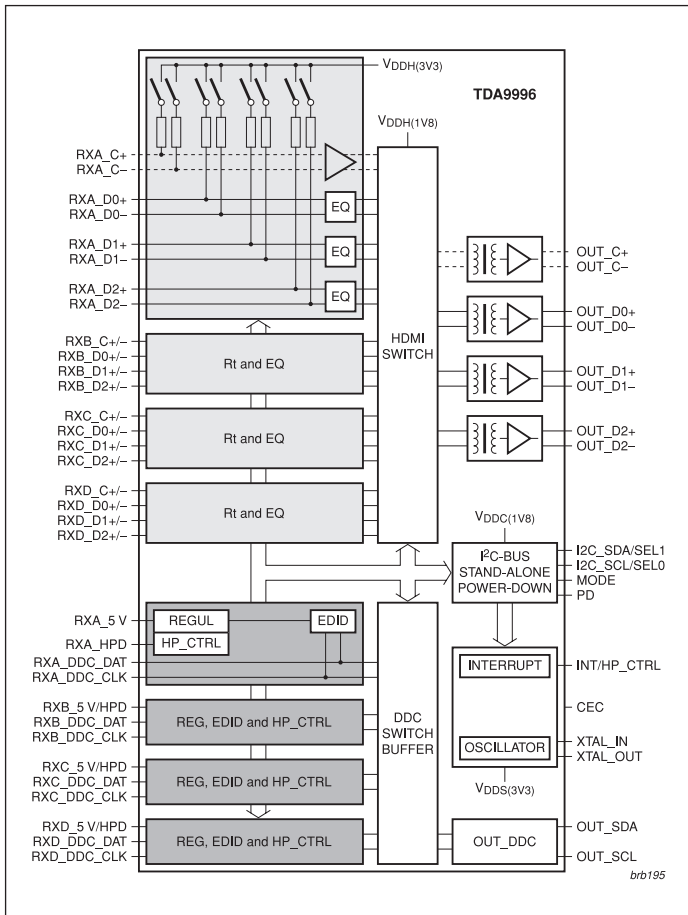
- ▶ Bit rate up to 2.5 Gbps
- ▶ Robust, auto-adaptive equalizer for use with long cables (up to 25 m as tested on AWG24 cable with 12-bit Deep Color 1080p stream)
- ▶ Automatic power management
- ▶ Embedded CEC-to-I<sup>2</sup>C translator
- ▶ Hot Plug Detection and termination-resistance controls
- ▶ DDC buffer and master switch
- ▶ 50-Ω single-ended termination resistances with embedded calibration
- ▶ EDID embedded (MTP/RAM) memory supplied by +5 V from HDMI source
- ▶ EDID update by I<sup>2</sup>C-bus
- ▶ Failsafe output mode
- ▶ 3.3- and 1.8-V power supply (TDA9995/TDA9996) or 3.3-V only (TDA9993)
- ▶ 8-kV HBM ESD protection for all input pins
- ▶ Compact LQFP (TDA9995, TDA9996) and TSSOP (TDA9993) packages.

### Benefits

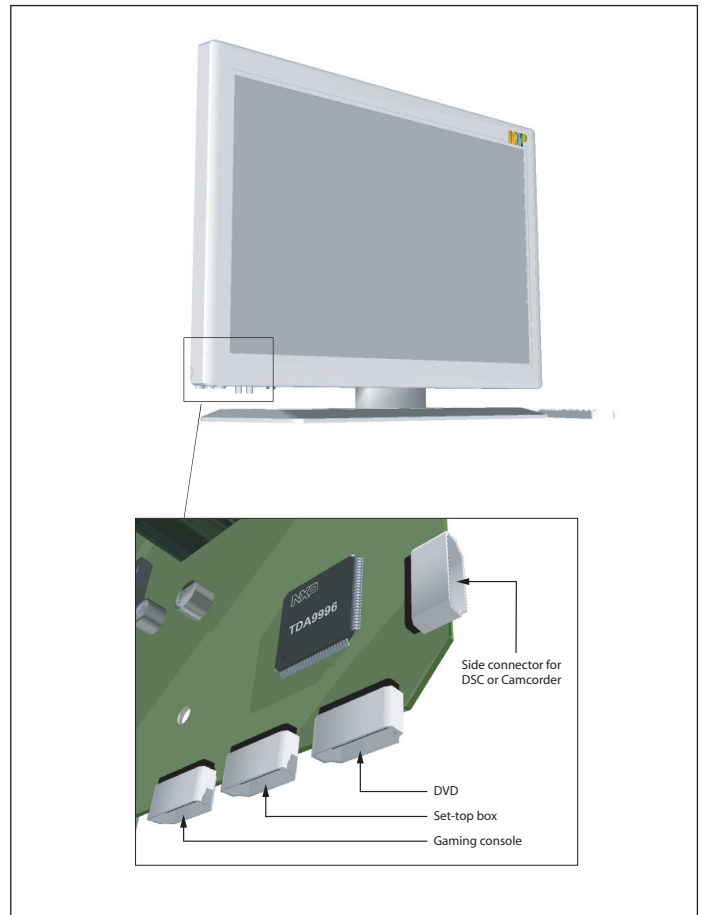
- ▶ More digital content on your TV
- ▶ Better picture quality on your TV
- ▶ TV anywhere in the home

### Applications

- ▶ TV
- ▶ A/V receivers



TDA9996 block diagram



TDA9996 application example

### HDMI switch family overview

Product	Description	Package	Dimensions
TDA9996	HDMI 1.3a switch (4:1) with equalizer	LQFP100 (SOT470-1)	14 x 14 x 1.4 mm
TDA9995	HDMI 1.3a switch (3:1) with equalizer	LQFP100 (SOT470-1)	14 x 14 x 1.4 mm
TDA9993	HDMI 1.3a buffer (1:1)	TSSOP38 (SOT510-1)	9.7 x 4.4 x 1.1 mm

### Consumer Electronics Control (CEC)

The TDA9996A supports the CEC protocol, an optional function of the HDMI specification that includes a number of recommended features that enhance functionality and improve the interoperability of devices connected via HDMI.

### Authorized Test Center (ATC)

NXP's ATC laboratory, located in Caen, France, qualifies and certifies devices following HDMI Compliance Test Specification (CTS) 1.3b.

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

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