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.

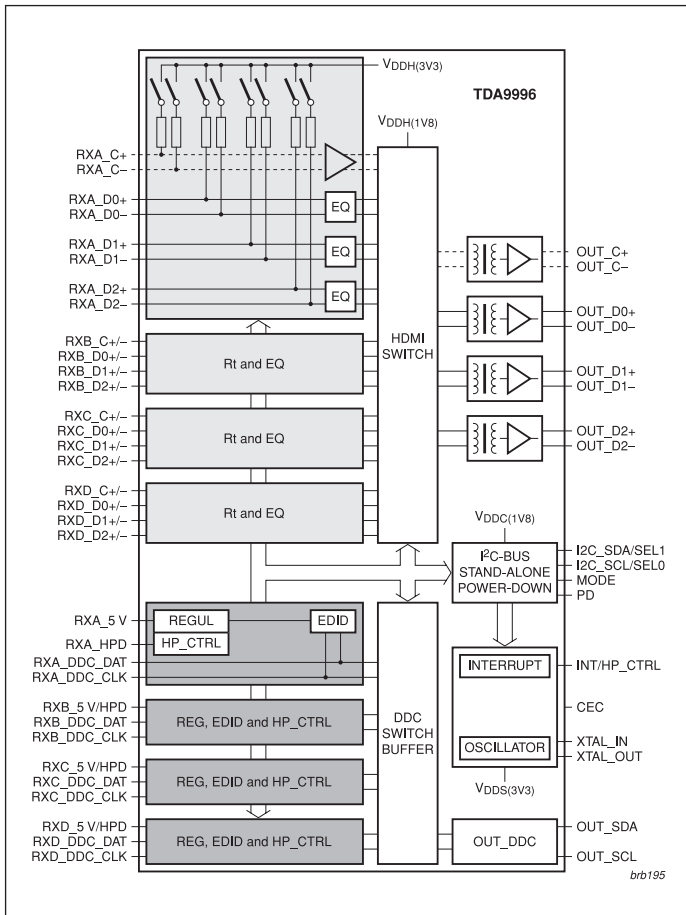The TDA9996 has four inputs, while the TDA9995 has three. The TDA9993 is a 1-to-1 buffer.

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^{2}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^{2}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.
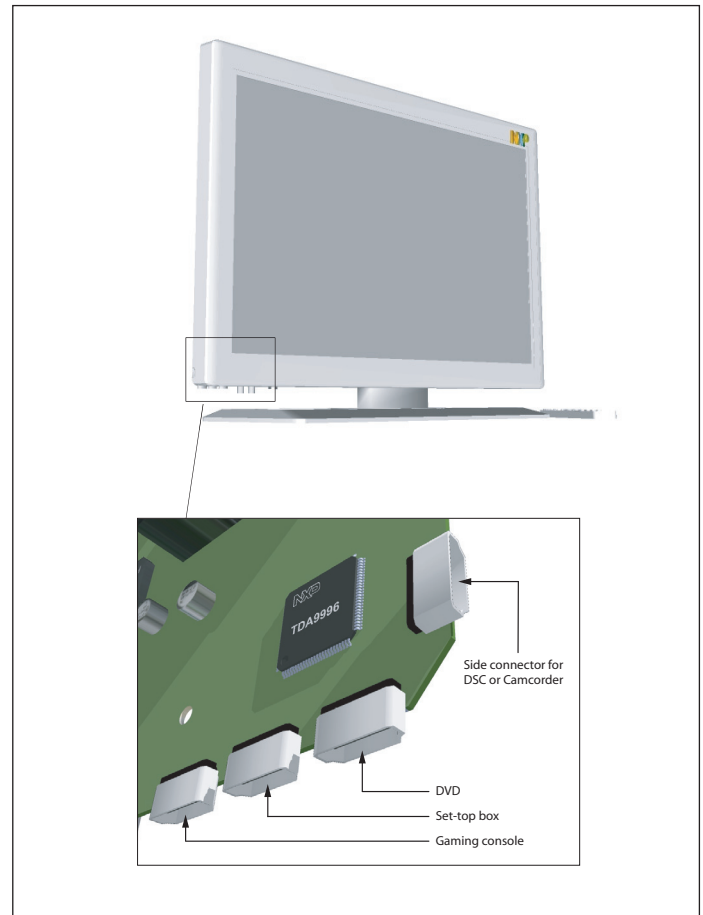
Benefits

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

Applications

‣ TV
‣ A/V receivers

NXP founded by Philips

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