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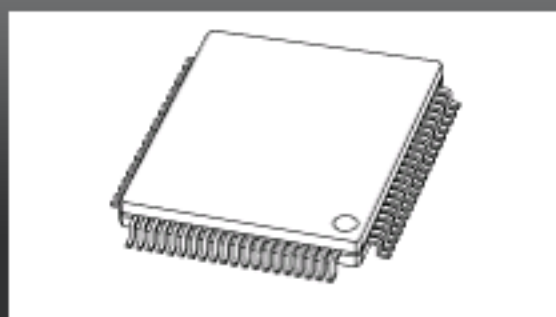
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TDA9984BHW

HDMI 1.4a transmitter with 1080p upscaler embedded

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TDA9984BHW/C1,518

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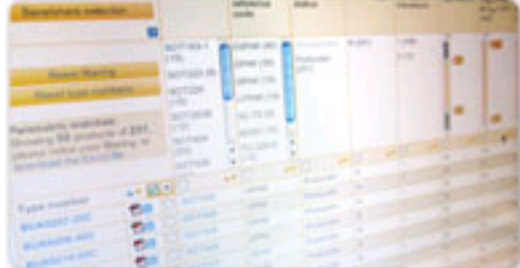
The TDA9984A; TDA9984B is a High-Definition Multimedia Interface (HDMI) 1.4a transmitter with embedded 1080p upscaling functionality. It is backward compatible DVI 1.0 and can be connected to any DVI 1.0 and HDMI sink. It allows mixing a 3 x 8-bit RGB or YCbCr video stream with a pixel rate up to 150 MHz together with up to 4 x I2S-bus or one S/PDIF audio streams with an audio sampling rate up to 192 kHz. It supports Gamut boundary description (xVCC), as well as HD audio, both HDMI 1.4a features. A programmable upscaling block allows creating a 1080p output from a standard definition input. An intrafield deinterlacer is included in the scaler.

In order to be compatible with most applications, and thanks to the integration of a fully programmable input formatter and color space conversion block, the video input formats accepted also include YCbCr 4 : 4 : 4 (up to 3 x 8-bit), YCbCr 4 : 2 : 2 semi-planar (up to 2 x 12-bit) and YCbCr 4 : 2 : 2 compliant with ITU656 (up to 1 x 12-bit). In case of ITU656-like format, the input pixel clock can be made active on both edges. TDA9984A; TDA9984B supports xVCC HDMI 1.4 feature and new HDMI 1.4a 3D formats. The HDCP key set can be stored internally in a non-volatile OTP memory for maximum security only in TDA9984A.

The TDA9984A; TDA9984B includes a true I2C-bus master interface for DDC-bus communication for EDID purpose.

The TDA9984A; TDA9984B can be controlled by an I2C-bus interface.

Parametric search



- Features and benefits
- 3 x 8-bit video data input buses; CMOS and LV-TTL compatible
 - Horizontal synchronization, vertical synchronization and data enable inputs or VREF, HREF and FREF inputs which can be used for synchronization
 - Pixel rate clock input can be made active on one or both edges; selectable via I2C-bus
 - 4 x I2S-bus audio input channels, one S/PDIF channel; audio data rate up to 192 kHz per input for both standards
 - High bit rate audio support via HBR interface (compatible with Dolby TrueHD and DTS-HD)
 - 250 MHz to 1.50 GHz TMDS transmitter operation
 - Programmable input formatter and upsampler/interpolator allows input of any of the 4 : 4 : 4 or 4 : 2 : 2 semi-planar and 4 : 2 : 2 ITU656-like formats
 - Programmable color space converter allows to input RGB video data and to output
 - RGB or YCbCr 4 : 2 : 2 HDMI video data, or to input YCbCr video data and to output
 - RGB or YCbCr 4 : 2 : 2 HDMI video data; converter can be passed
 - Upscaler allows creating a 1080p output from a standard definition input by using intelligent edge interpolation
 - Supports 3D capabilities in Top-and-Bottom, Side-by-Side (Half) and Frame Packing transmission
 - Repetition of video samples as required by the HDMI standard
 - Insertion of HDMI additional information such as Info Frames
 - Color gamut metadata packet transmission (xVCC)
 - Downstream availability using Hot Plug Detection (HPD) input and receiver detection (RxSense circuit)
 - Master DDC-bus interface
 - Deals with multiple levels of HDCP receivers and repeaters only in TDA9984A
 - Internal SHA-1 calculation only in TDA9984A
 - Controllable via I2C-bus
 - Low power dissipation
 - 1.8 V and 3.3 V power supplies
 - Power-down mode
 - Hard reset
 - Pin-to-pin compatible with TDA9983A/B and TDA9981A/B
 - Software compatible with TDA9983A/B and TDA9981A/B
 - Dark Green package, fully comply to the EU directive 2002/95/EC (RoHS) but in addition free of Halogens and Antimony

- Applications
- Set-Top Box (STB)
 - DVD player
 - DVD recorder
 - AV receiver
 - Home theater
 - Digital video camera
 - Digital still camera
 - Personal video recorder
 - Media center PCs, graphic cards
 - Switches

Parametric search

all HDMI transmitters

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General product disclaimer

Quality and reliability disclaimer

Parametrics of this product

Type number	Package	package reference code	Output number	HDMI version	video	Max video pixel Rate(GHz)	High Bit Rate Audio	HDCP	CEC	Video Upscale	HDMI 1.4a: 3D	HDMI 1.4a: Adobe RGB	HDMI 1.4a: ARC	I/O	Total power Standby mode typical(mW)	Supply voltage(V)	Total power Operation mode typical(mW)	Application
TDA9984BHW	SOT841-4 (HTQFP80)	HTQFP80	1	1.4a	1080p 50/60 Hz 8-bit color	150	yes	no	no	yes	yes	yes	yes	RGB/YUV	30	3.3 V / 1.8 V	320	STB, BD player

Similar products

Parametric search

all HDMI transmitters

Parametrics series

Products / Packages

Type number	Orderable part number	Ordering code (12NC)	Product status	Package	Packing	Marking	ECCN
TDA9984BHW/C1	TDA9984BHW/C1,518	9352 926 26518	Volume production	SOT841-4 (HTQFP80)	Reel Dry Pack, SMD, 13"	Standard Marking	
TDA9984BHW/C1	TDA9984BHW/C1,551	9352 926 26551	Volume production	SOT841-4 (HTQFP80)	Tray Dry Pack, Bakeable, Single	Standard Marking	
TDA9984BHW/C1	TDA9984BHW/C1,557	9352 926 26557	Volume production	SOT841-4 (HTQFP80)	Tray Dry Pack, Bakeable, Multiple	Standard Marking	

Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS	Leadfree conversion date	RHF	IFR (FIT)	MTBF (hours)	MSL	MSL LF
TDA9984BHW/C1	TDA9984BHW/C1,518	TDA9984BHW/C1	<div>EU/CN RoHS COMPLIANT</div>	Always Pb-free	<div></div>			3	3
TDA9984BHW/C1	TDA9984BHW/C1,551	TDA9984BHW/C1	<div>EU/CN RoHS COMPLIANT</div>	Always Pb-free	<div></div>			3	3
TDA9984BHW/C1	TDA9984BHW/C1,557	TDA9984BHW/C1	<div>EU/CN RoHS COMPLIANT</div>	Always Pb-free	<div></div>			3	3

Quality and reliability disclaimer

Documentation for this product

Type	Format	Title	Date
Leaflet	pdf	NXP HDMI 1.4a transmitter/ upscaler TDA9984 (v.1.0)	2011-06-07

Ordering & availability

Type number	Ordering code(12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
TDA9984BHW/C1	9352 926 26518	TDA9984BHW/C1,518							not available
TDA9984BHW/C1	9352 926 26551	TDA9984BHW/C1,551	NA	MOUSER ELECTRONICS	687		5/5/2012	<div>Buy</div>	<div>Order samples</div>
			NA	MOUSER ELECTRONICS	687		5/5/2012	<div>Buy</div>	
TDA9984BHW/C1	9352 926 26557	TDA9984BHW/C1,557							not available

Sample

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