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ADAV4312 Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder

Data Sheets | Application Notes html(19k) | Evaluation Boards | Price, Packaging, and Availability

Product Description

The ADAV43x2/ADAV44x2 are part of a family of enhanced audio processors targeting advanced TV applications, with full support for digital and analog baseband audio as well as multistandard broadcast...More

The ADAV4312 is currently available to Analog Devices' OEM and ODM customers and partners with order requirements of 30KU/year or more. Further information on meeting these requirements may be requested by contacting the Audio/Video Products Group.

Additional product choices for Advanced TV applications are available on the Advantiv™ site.

Advantiv Advanced Television Solutions by Analog Devices

Specifications

Instructions/Cycles	2560
DAC DNR (dB)	95dB
DAC THD+N @ 1 kHz (-3dB)	85dB
Digital I/O Channels	8/2
Product Description	Audio Processor for Advanced TV w/ Sound IF Demod & Stereo Decoder

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Functional Block Diagram

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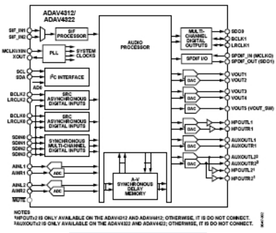

Symbols and Footprints

Features

- Sound IF (SIF) processor
  SIF demodulator and broadcast stereo decoder
  ADAV4312 and ADAV4412–NTSC region (BTSC-M, EIAJ-M, A2-M)
  ADAV4322 and ADAV4422–Worldwide (NICAM-BG/DK/I/L, A2-BG/DK/M, BTSC-M, EIAJ-M)
  Automatic sound IF standard detection
- Fully configurable 28 bit audio processor - loads comprehensive TV audio flow on reset
- Also supports SigmaStudio™ with Analog Devices Inc and third party branded algorithms for custom design
- Adjustable digital delay line for audio/video Synchronization for up to 200 ms stereo delay
- High performance 24-bit ADC and DAC
  95 dB DNR performance on DAC channels
  95 dB DNR performance on ADC channels
  Dual headphone outputs with integrated amplifiers
- Choice of high performance pulse-width modulation (PWM) digital outputs (ADAV4412 and ADAV4422) or DAC analog voltage outputs (ADAV4312 and ADAV4322)
- Multichannel digital baseband I/O
  4 stereo synchronous digital I²S® input channels
  2 stereo asynchronous I²S channels with integrated SRC supporting input sample rates from 5 kHz to 50 kHz
  1 stereo synchronous digital I²S output
  S/PDIF output with S/PDIF input mux capability
- Fast I²C® control
- Operates from 3.3 V (analog), 1.8 V (digital core), and 3.3 V (digital interface)
  Features on-chip 1.8 V regulator eliminating the need for a 1.8 V supply
- ADAV4312–NTSC region SIF, voltage output
  ADAV4412–NTSC region SIF, PWM output
  ADAV4322–Worldwide SIF, voltage output
  ADAV4422–Worldwide SIF, PWM output
- Available in 80-lead LQFP

Price, Packaging, and Availability

Print Table

ADAV4312 Model Options

Model	Status	Package	Pins	Temp Range	Price* (1000 pcs.)	Available	RoHS Compliant	Samples Cart	Purchase Cart
ADAV4312BSTZ	Contact ADI	80 ld LQFP (14x14mm)	80	TBD	$10.50	3/7/2008	Y Material Declaration	Contact ADI	Contact ADI

The USA list pricing shown is for BUDGETARY USE ONLY, shown in United States dollars (FOB USA per unit for the stated volume), and is subject to change. International prices may differ due to local duties, taxes, fees and exchange rates. For volume-specific price or delivery quotes, please contact your local Analog Devices, Inc. sales office or authorized distributor. Pricing displayed for Evaluation Boards and Kits is based on 1-piece pricing.

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Selection Tables

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Audio Signal Processors

Part #	Instructions/ Cycle	DNR	THD+N	Digital I/O channels	Analog I/O channels (ADCs/DACs)	Product Description
AD1940	1536	-	-	16/16	0/0	SigmaDSP Multichannel 28-/56-Bit Audio Processor
AD1941	1536	-	-	16/16	0/0	SigmaDSP Multichannel 28-/56-Bit Audio Processor
AD1953	512	112	-100	4/6	0/3	SigmaDSP 3 Ch, 26-/48-Bit Processing D/A
AD1954	512	112	-100	4/2	0/3	SigmaDSP 3 Ch, 26-/48-Bit Processing D/A
AD1970	-	87	87	2/0	2/1	Complete MTS (BTSC) TV Stereo Encoder
ADAU1401	1024	ADC: 100 DAC: 104	ADC: -83 DAC: -90	8/8	2/4	28/56-Bit Automotive Audio Processor with Two ADCs and Four DACs
ADAU1701	1024	ADC: 100 DAC: 104	ADC: -83 DAC: -90	8/8	2/4	SigmaDSP 28/56-Bit Audio Processor with 2 ADC/4 DAC
ADAU1702	512	ADC: 100 DAC: 104	ADC: -83 DAC: -90	8/8	2/4	SigmaDSP 28/56-Bit Audio Processor with 2 ADC/4 DAC

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* The pricing listed here is provided only for budgetary purposes as recommended list price in U.S. Dollars in the United States ex factor per unit for the stated volume. Pricing displayed for Evaluation Boards and Kits is based on 1-piece pricing.

Audio Signal Processors for TV Audio

Part #	Instructions/ Cycle	Analog Input ADC Channels	Analog Output DAC Channels	DNR	THD+N	Digital Output PWM Channels (Diff)	Digital Audio I/O channels	Product Description
ADAV400	3072	2	8	95	-90 ADC	-	8/8	SigmaDSP Multichannel Audio Processor with Embedded 2ADC/8DAC Codec
ADAV4101	2560	2	6	95	-90 ADC -85 DAC	-	8/2	Audio Processor for Advanced TV
ADAV4201	2560	2	4	95	-90 ADC -85 DAC	2	8/2	Audio Processor for Advanced TV
ADAV4312	2560	4	11	95	-90 ADC -85 DAC	-	8/2	Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder
ADAV4322	2560	4	11	95	-90 ADC -85 DAC	-	8/2	Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder
ADAV4412	2560	4	7	95	-90 ADC -85 DAC	4	8/2	Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder
ADAV4422	2560	4	7	95	-90 ADC -85 DAC	4	8/2	Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder

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New Audio Signal Processors
ADAV4622 - Audio Processor for Advanced TV with Sound IF Demodulator and Stereo Decoder

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