

# CS424XX

## MULTICHANNEL SURROUND-SOUND CODECS IDEAL FOR HOME THEATER AND AUTOMOTIVE AUDIO SYSTEMS



52-PIN MQFP

(actual size: 13.2 mm x 13.2 mm)



64-PIN LQFP

(actual size: 12 mm x 12 mm)

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Part	Resolution (bits)	Dynamic Range (dB)	THD+N (dB)	Sample Rate (kHz)	Analog Outputs	Power Supply (V)	Type	Comments	Package
<b>CS42432/35/36/38</b>	24	105/108 DACs; 102/105 ADCs	-95/-98 DACs; -95/-98 ADCs	192	Single-Ended or Differential DACs and ADCs	VA=3.3 or 5; VD=3.3; VL=1.8 to 5	Multi-channel	Multichannel CODEC, 6/8 DACs, 4/6 ADCs, TDM I/F	52 MQFP
<b>CS42448/888</b>	24	105/108 DACs; 102/105 ADCs	-95/-98 DACs; -95/-98 ADCs	192	Single-Ended or Differential DACs and ADCs	VA=3.3 or 5; VD=3.3 or 5; VL=1.8 to 5	Multi-channel	Multichannel CODEC, 8 DACs, 4/6 ADCs, TDM and PCM I/F	64 LQFP

**CS42432/35/36/38 AND CS42448/888**

The CS424XX from Cirrus Logic are highly integrated CODECs that are engineered to simplify the design process and enhance listening enjoyment in today's home theater and automotive audio systems.

With a wide dynamic range, negligible distortion and low-noise operation, this family is loaded with high-demand features that designers will appreciate.

The CS424XX are the most highly integrated surround-sound CODECs on the market today, allowing system designers to incorporate up to eight single-ended or six differential audio input sources and up to eight single-ended or differential output sources. This high level of integration is a boost to designers of audio systems, as it eliminates the need for external analog-to-digital (A/D) converters in order to pass multiple audio channels to a DSP chip for audio processing.

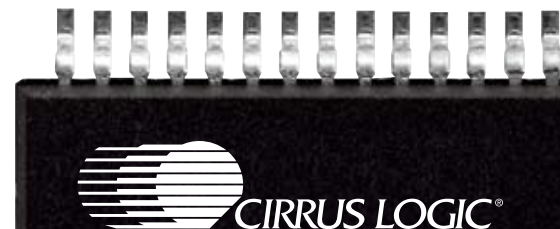
The increased input capability allows design of A/V receivers that can receive audio from multiple sources such as set-top boxes, home theater systems, or automotive entertainment systems. The audio input sources could include in-car navigation systems, mobile phones, CD/DVD players, and the radio tuner. Each of these CODECs features multibit Delta-Sigma modulators, resulting in low out-of-band noise, as well as separate control port and serial port supplies for a glueless interface to DSPs.

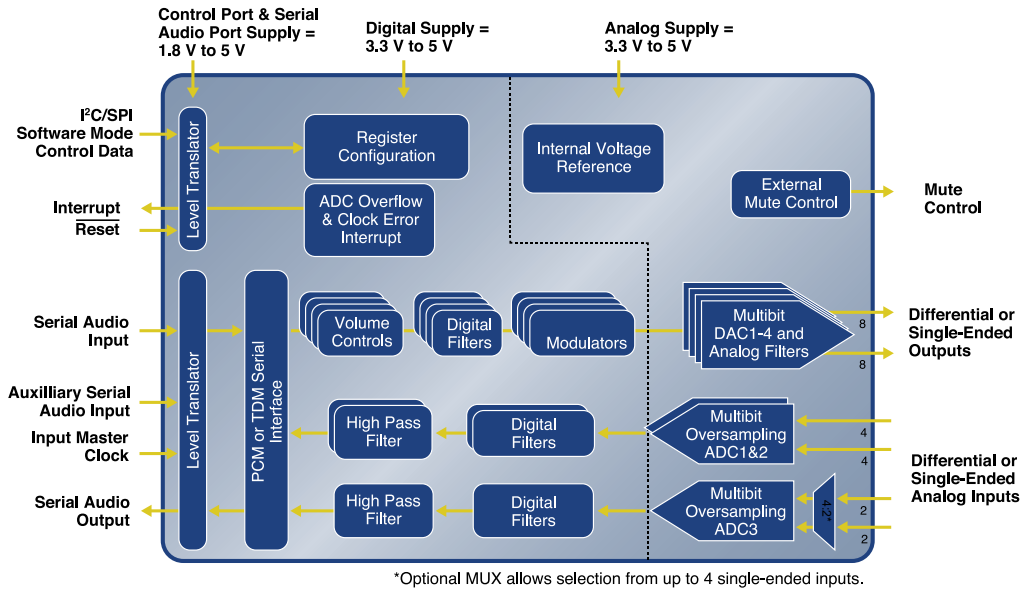
The CS42432/35/36/38 includes a Time Division Multiplexing only serial port. The CS42448 and CS42888 feature a complete serial port that supports all standard audio data formats, as well as TDM mode.

All D/A converters are 24 bit, with support for sample rates up to 192 kHz, and provide impressive dynamic range of up to 108 dB. In addition, all devices feature 24-bit A/D converters and provide dynamic range up to 105 dB.

The CS424XX outputs feature Cirrus Logic's Popguard® technology to eliminate powercycling clicks and pops. By eliminating external components, Popguard® technology enhances the listening experience for the consumer while simplifying system design and reducing BOM costs.

The CS424XX family delivers advanced performance, design flexibility, reduction in BOM costs, and a competitive price-point, providing exactly what designers need to get their next product to market fast!





**FEATURES**

- Four to six 24-bit A/D converters & six to eight 24-bit D/A converters
  - Multibit Delta-Sigma architecture
  - Input mux allows up to 8 inputs
- System sampling rates up to 192 kHz
- A/D dynamic range
  - 105 dB differential
  - 102 dB single-ended
- D/A dynamic range
  - 108 dB differential
  - 105 dB single-ended
- THD+N (A/D & D/A)
  - -98 dB differential
  - -95 dB single-ended
- Programmable A/D high pass filter for DC offset calibration
- Auxiliary input source for additional external A/D or S/PDIF receiver
- Logarithmic digital-volume control
- I<sup>2</sup>C®/SPI™ host-control port
- Cirrus Logic Popguard® technology minimizes clicks and pops
- Support logic levels between 5V and 1.8 V
- Available in automotive (-40°C to +105°C) and commercial (-40°C to 85°C) grades
- CS42432/35/36/38 available in a 52-pin MQFP
- CS42448 and CS42888 available in a 64-pin LQFP

# Mouser Electronics

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- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
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- Изготовление тестовой платы монтаж и пусконаладочные работы.



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