

Press Release

PA5322 100dB, 24-Bit, 192 kHz Stereo Audio CODEC



Chandler, Ariz., January, 2010

ProTek Analog a division of ProTek Devices introduces the PA5322 a Low Power High performance Stereo Audio CODEC

. PA5322 performs stereo digital to analog conversion and analog to digital conversion continuously from 8 kHz to 200 kHz sampling frequency. PA5322 is ideal for high performance cost sensitive consumer audio applications.

PA5322 can accept I²S; left justified and right justified serial audio data formats up to 24-bit word length. ADC and DAC operate on independent sampling frequencies and clocks.

The device uses advanced multi-bit (Δ - Σ) delta-sigma modulation technique to convert data between digital and analog.

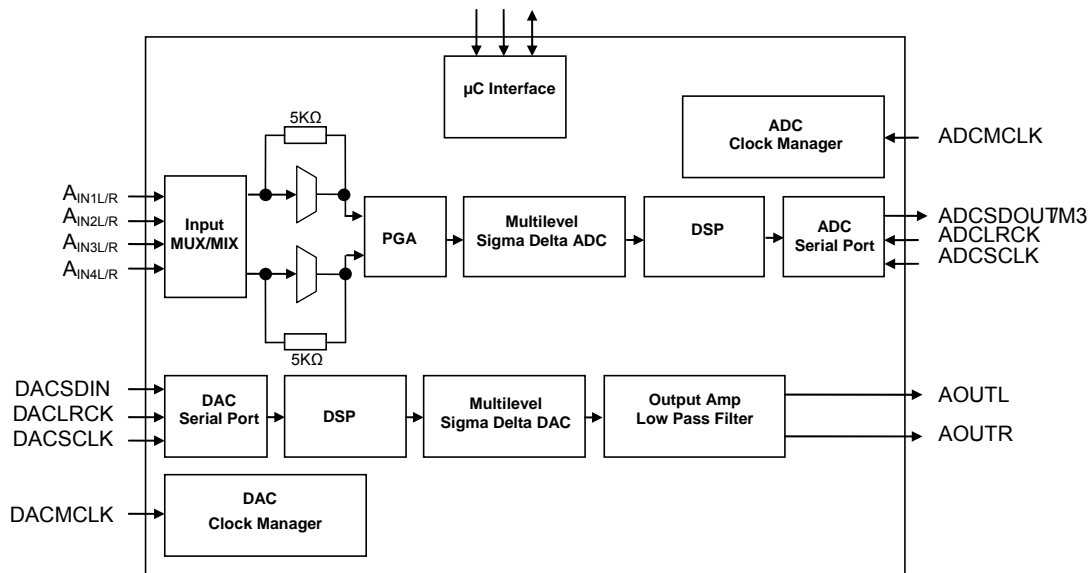
The multi-bit (Δ - Σ) delta-sigma modulators makes the device with low sensitivity to clock jitter and low out of band noise.

PA5322 can operate either in the hardware or software mode. In the hardware mode, pin M0, M1, M2 and M3 set the operation of the device. In the software mode, PA5322 provides SPI or 2-wire micro-controller interfaces to configure its operations.

The PA5155 is available in a SSOP-28 package and is specified for operation over the -40°C to +85°C temperature range.

Sample quantities are available upon request. SPICE model and parameters are available for circuit simulation on request.

BLOCK DIAGRAM:



APPLICATION USES

- DVD recorder
- Personal video recorder
- LCD and digital TVs
- Car audio
- AV receiver
- Digital camera, camcorder

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FEATURES

ADC and DAC:

- 100 dB dynamic range
- -90 dB THD
- 8 kHz to 200 kHz sampling frequency
- I²S, left justified and right justified audio data format, 16-24 bits
- 128, 192, 256, 384, 512, 768 and 1024 MCLK to LRCK ratios
- Independent ADC and DAC sampling frequencies and clocks
- Advanced multi-bit delta-sigma with low sensitivity to clock jitter
- Single power supply from 3V to 5.5V
- Hardware mode or SPI or 2-wire uC interface

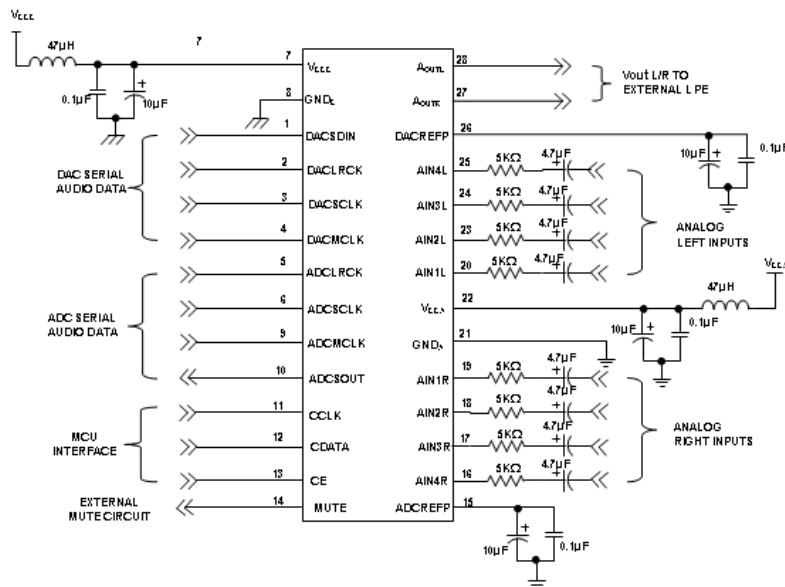
ADC:

- 4-to-1 MUX for analog inputs
- Direct 2 V_{RMS} analog input
- ADC PGA from 11.5 dB to -11.5 dB in 0.5 dB per step
- Digital attenuation from 6.5 dB to 89.5 dB in 0.5 dB per step
- Optional high pass filter to remove analog DC offset

DAC:

- Digital volume control from 0 dB to 120 dB attenuation in 0.5 dB per step, with soft ramp and zero crossing transition
- De-emphasis filter for 32, 44.1 and 48 kHz sampling frequencies
- Selectable fast and slow roll-off filters
- 95 dB dynamic range
- -85 dB THD+N
- Up to 200 kHz sampling frequency
- I²S audio data format, 16-24 bits
- Single power supply 4.5 V to 5.5V

TYPICAL APPLICATION



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About ProTek Devices

ProTek Devices, based in Chandler, Ariz., provides advanced Analog, Mixed signal and Transient Voltage Suppressor devices for Voice, Video and Data (V2D). With more than 25 years of engineering and manufacturing experience, ProTek provides Analog and TVS solutions which function effectively with the latest high-speed communication and networking products.

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