

CS5346

HIGH INPUT IMPEDANCE AUDIO ADC WITH 6:1 MUX, PGA, MIC PRE



CS5346 48-PIN LQFP

(actual size: 7 mm x 7 mm)



Part	Resolution (bits)	Dynamic Range (dB)	THD+N (dB)	Sample Rate (kHz)	Analog Inputs	Power Supply (V)	Comments	Package
CS5346	24	103	-95	192	Single-ended	VA = 5; VD = 3.3; VL = 3.3 to 5	6:1 Stereo input MUX Mic Pre-amp, PGA High input impedance	48 LQFP

The CS5346 is a 24-bit stereo audio A/D converter with a highly integrated analog front end. It includes an input switch which supports up to six stereo inputs, one of which can be selected for line level inputs or microphone level inputs. The microphone input path includes a 32 dB gain pre-amplifier, and a programmable gain amplifier is available for both the line level and microphone inputs with ± 12 dB gain and 1 dB step sizes.

The output of the PGA is followed by an advanced 5th order, multibit Delta-Sigma modulator and digital filtering/decimation. Sampled data is transmitted by the serial audio interface at rates from 8 kHz to 192 kHz in either slave or master mode. With its high integration, the CS5346 helps the designer reduce the complexity of the analog input circuitry, which reduces the need for additional components and time to market while preserving premium performance for consumer applications such as home theaters, DVD recorders and sounds cards.

The CS5346 achieves 103 dB dynamic range, -95 dB THD+N and is available in a 48-pin LQFP package in commercial (-40 to 85 °C) and automotive (-40 to 105 °C) grades. This cost effective solution is an addition to Cirrus Logic's wide portfolio of A/D converters and is pin-to-pin compatible with the CS5345.

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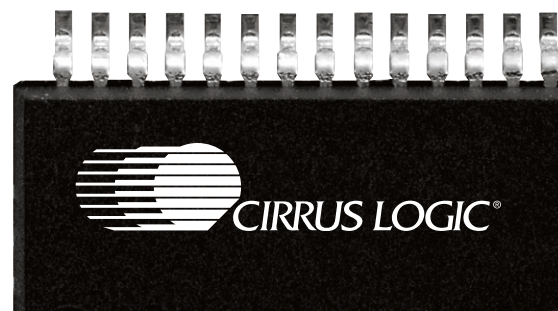
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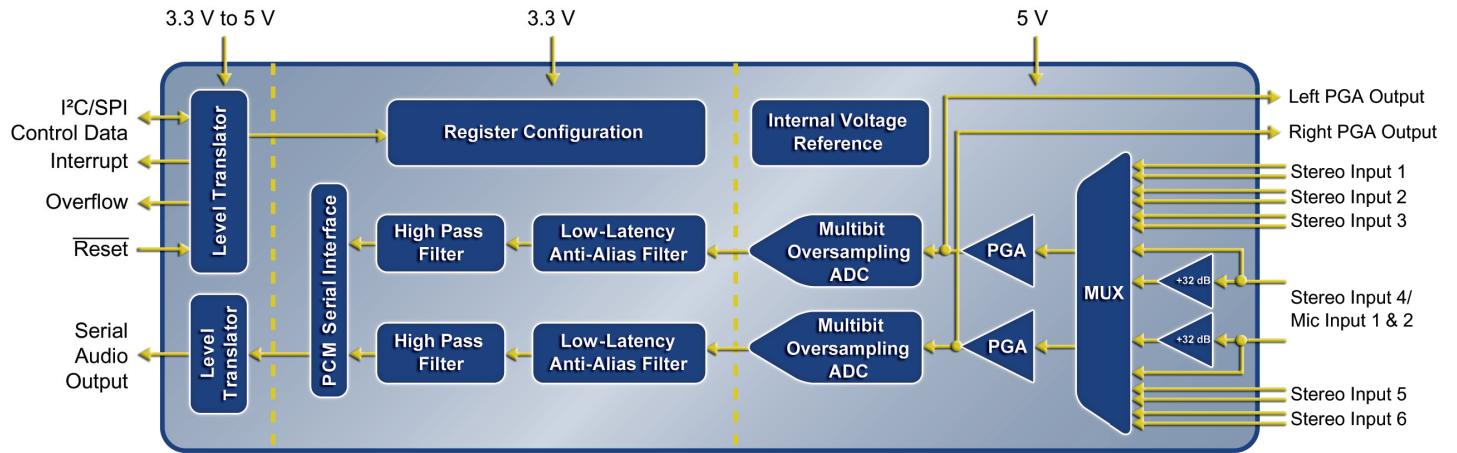
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CS5346 FEATURES

- 103 dB dynamic range
- -95 dB THD+N
- Stereo 6:1 input multiplexer
- Programmable Gain Amplifier (PGA)
 - ±12 dB gain, 0.5 dB step size
 - Zero-crossing, click-free transitions
- Stereo microphone inputs
 - +32 dB gain stage
 - Low-noise bias supply
- Up to 192 kHz sampling rates
- Selectable 24-bit, left-justified or I²S serial
- Audio interface formats
- Power-down mode
- Power supply
 - 5 V analog power supply
 - 3.3 V digital power supply
 - 3.3 V to 5 V logic levels
- Package
 - 48-pin LQFP
 - Pin-compatible with CS5345