CIRRUS LOGIC®

Leading the Digital Entertainment Revolution™

CS8421

20-pin TSSOP

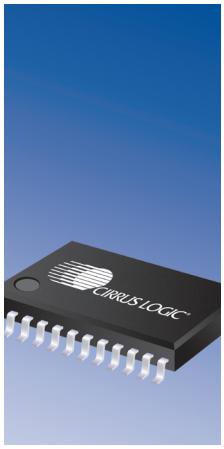
6.5 mm

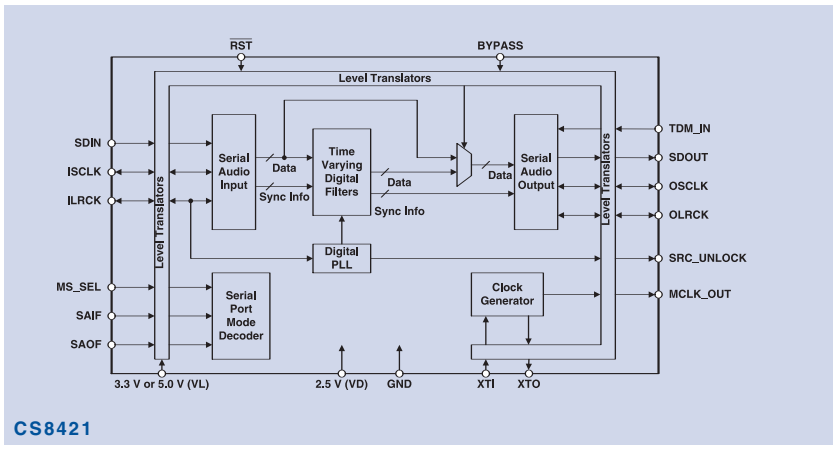
6.4 mm

20-pin QFN

5.0 mm

5.0 mm
IC dimensions
(pin-to-pin nominal)





CS8421

CS8421 Features & Benefits

- High performance, asynchronous sample rate converter
- 16, 20, 24, 32-bit support
- Supports sample rates 8 kHz to 192 kHz
- Input/Output ratios from 7.75:1 to 1:8
- 175 dB dynamic range
- -140 dB THD+N
- H/W mode - no programming required
- Low group delay
- Bypass mode
- TDM mode with matched phase for daisy chaining
- On-chip crystal oscillator
- Flexible 3-wire serial digital audio input port
- +2.5 V digital power supply (VD)
- +3.3 V or 5.0 V interface power supply (VL)
- Space-saving 20-pin QFN or TSSOP package
- CS8421 Price: $4.85(10K)

New Flagship Sample Rate Converter Delivers Transparent Audio Processing

CS8421

The CS8421 is a 32-bit, 192 kHz, asynchronous, stereo sample-rate converter. Digital audio inputs and outputs can be 32, 24, 20, or 16-bits. Input and output data can be completely asynchronous, synchronous to an external data clock, or the part can operate without any external clock by using an integrated oscillator. Audio data is input and output through configurable 3-wire input/output ports and the part does not require any software control for mode configuration. The CS8421 supports a TDM mode, which enables several of these ICs to be serially connected together, allowing their output data to be multiplexed onto one line for input into a DSP or other TDM-capable multichannel device. When operating in this mode, the phase of output data for each device is matched. Also included is a bypass mode that allows the input clock and data to be passed directly to the output port without sample rate conversion.

Designers will appreciate the device's ease of use – simple hardware configuration eliminates the need for an external microcontroller. Another benefit is the space-saving package size – the part is available in a 20-pin TSSOP or 20-pin QFN. Delivering unrivaled performance of 175 dB dynamic range and -140 dB THD+N, the CS8421 provides a solution to designers with transparent data conversion, thus maintaining the sound quality in their products.

Applications include consumer electronics devices, automotive audio systems, computer sound cards and pro audio equipment such as digital mixing consoles, effects processors and multitrack digital recorders.

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