

Low-Noise Microphone with I²S Digital Output

Product Brief

GENERAL DESCRIPTION

The ICS-43432 is a high performance, low power, digital output, omnidirectional MEMS microphone with a bottom port. The complete ICS-43432 solution consists of a MEMS sensor, signal conditioning, an analog-to-digital converter, decimation and antialiasing filters, power management, and an industry standard 24-bit I²S interface. The I²S interface allows the ICS-43432 to connect directly to digital processors, such as DSPs and microcontrollers, without the need for an audio codec in the system.

The ICS-43432 has a high SNR making it an excellent choice for far field applications. The ICS-43432 has a wideband frequency response, resulting in natural sound with high intelligibility. The sensitivity tolerance of the ICS-43432 is ±1 dB, which enables high performance microphone arrays without the need for system calibration.

The ICS-43432 is available in a thin 4 mm × 3 mm × 1 mm surface-mount package.

**Protected by U.S. Patents 7,449,356; 7,825,484; 7,885,423; and 7,961,897. Other patents are pending.*

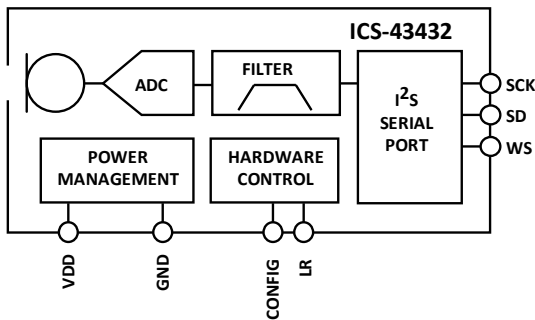
APPLICATIONS

- Microphone Arrays
- Smart Televisions
- Remote Controls
- Teleconferencing Systems
- Gaming Consoles
- Security Systems
- Wearables

FEATURES

- Digital I²S interface with high precision 24-bit data
- High SNR of 65 dBA
- Sensitivity of -26 dBFS
- ±1 dB sensitivity tolerance
- Wide frequency response from 45 Hz to 20 kHz
- Low current consumption of 1.0 mA
- High PSR of -80 dBFS
- Acoustic overload point of 116 dB SPL
- Small 4 mm × 3 mm × 1 mm surface-mount package
- Compatible with Sn/Pb and Pb-free solder processes
- RoHS/WEEE compliant

FUNCTIONAL BLOCK DIAGRAM



ORDERING INFORMATION

PART	TEMP RANGE	PACKAGING
ICS-43432	-40°C to +85°C	13" Tape & Reel
EV_IC3-43432-FX	—	