

Low-Noise Microphone with TDM Digital Output

GENERAL DESCRIPTION

The ICS-52000 is a digital TDM output bottom port microphone. The complete ICS-52000 solution consists of a MEMS sensor, signal conditioning, an analog-to-digital converter, decimation and anti-aliasing filters, power management, and an industry standard 24-bit TDM interface. The TDM interface allows an array of up to 16 of the ICS-52000 microphones to connect directly to digital processors, such as DSPs and microcontrollers, without the need for an audio codec in the system. All microphones in an array sample their acoustic signals synchronously, enabling precise array processing.

The ICS-52000 has a high SNR of 65 dBA and a wideband frequency response. The sensitivity tolerance of the ICS-52000 is ± 1 dB, which enables high-performance microphone arrays without the need for system calibration.

The ICS-52000 is available in a small 4 mm \times 3 mm \times 1 mm surface-mount package.

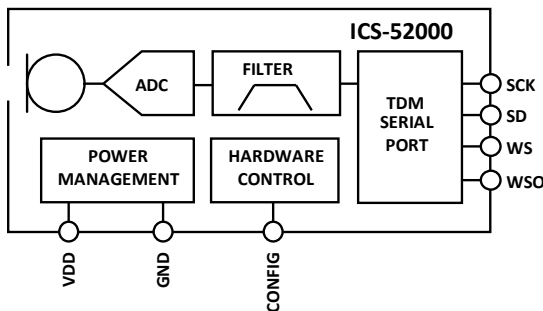
APPLICATIONS

- Speech Recognition Arrays
- Smart Televisions
- Teleconferencing Systems
- Gaming Consoles
- Security Systems
- Microphone Arrays

FEATURES

- Digital TDM Interface with High Precision 24-bit Data
- Supports TDM arrays of up to 16 synchronously-sampled channels
- High 65 dBA SNR
- -26 dB FS Sensitivity
- ± 1 dB Sensitivity Tolerance
- Wide Frequency Response from 50 Hz to 20 kHz
- Low Current Consumption: 1.0 mA
- High Power Supply Rejection: -80 dB FS
- 116 dB SPL Acoustic Overload Point
- Small 4 mm \times 3 mm \times 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-52000	-40°C to $+85^{\circ}\text{C}$	13" Tape & Reel
EV_IC5-52000-FX	—	