# PCM3002E

**General Purpose Audio Codec 2ADC / 2DAC Ch 24-Pin SSOP Tube**

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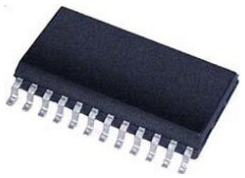
| **Manufacturer:** | Texas Instruments, Inc |
| **Package/Case:** | SSOP24 |
| **Product Type:** | Communication & Networking ICs |
| **RoHS:** | RoHS Compliant/Lead free |
| **Lifecycle:** | Active |



Images are for reference only

Inquiry

## General Description

The PCM3002 and PCM3003 are low-cost, single-chip stereo audio codecs (analog-to-digital and digital-to-analog converters) with single-ended analog voltage input and output.

The ADCs and DACs employ delta-sigma modulation with 64-times oversampling. The ADCs include a digital decimation filter, and the DACs include an 8-times oversampling digital interpolation filter. The DACs also include digital attenuation, de-emphasis, infinite zero detection, and soft mute to form a complete subsystem. The PCM3002 and PCM3003 operate with left-justified (ADC) and right-justified (DAC) formats, while the PCM3002 also supports other formats, including the I2S data format. The PCM3002 and PCM3003 provide a power-down mode that operates on the ADCs and DACs independently.

The PCM3002 and PCM3003 are fabricated using a highly advanced CMOS process, and are available in a 24-pin SSOP package. The PCM3002 and PCM3003 are suitable for a wide variety of cost-sensitive consumer applications where good performance is required.

The PCM3002 programmable functions are controlled by software. The PCM3003 functions, which are controlled by hardware, include de-emphasis, power-down, and audio data format selections.

## Key Features

Monolithic 20-BitADC and DAC

16/20-Bit Input/Output Data

Software Control: PCM3002

Hardware Control: PCM3003

Stereo ADC:
Single-Ended Voltage Input
Antialiasing Filter

64× Oversampling

High Performance
THD+N: &3150;86 dB

SNR: 90 dB

Dynamic Range: 90 dB

Stereo DAC:
Single-Ended Voltage Output

Analog Low-Pass Filter

64× Oversampling

High Performance
THD+N: –86 dB

SNR: 94 dB

Dynamic Range: 94 dB

Special (PCM3002, PCM3003)
Digital De-Emphasis: 32 kHz, 44.1 kHz, 48 kHz

Power Down: ADC/DAC Independent

Special (PCM3002)
Digital Attenuation (256 Steps)

Soft Mute

Digital Loopback

Four Alternative Audio Data Formats

Sampling Rate: 4 kHz to 48 kHz

Single 3-V Power Supply

Small Package: SSOP-24

APPLICATIONS
DVC Applications

DSC Applications

Portable/Mobile Audio Applications

## Recommended For You

**PCA9534APWR**

Texas Instruments, Inc

TSSOP16

**PCA9557PW**

Texas Instruments, Inc

TSSOP16

**PCA9538PWR**

Texas Instruments, Inc

TSSOP16

**PCA9515AD**

Texas Instruments, Inc

SOP8

**PCM2904DB**

Texas Instruments, Inc

SSOP

**PCM3000E**

Texas Instruments, Inc

SSOP28

**PCF8574N**

Texas Instruments, Inc

DIP16

**PCA9515BDGKR**

Texas Instruments, Inc

MSOP8

**PCM3500E**

Texas Instruments, Inc

SSOP24

**PCF8574RGTR**

Texas Instruments, Inc

QFN16

**PCI2050PDV**

Texas Instruments, Inc

QFP208

**PCA9539DW**

Texas Instruments, Inc

SOIC(DW)

**PCI1510GGU**

Texas Instruments, Inc

BGA144

**PCM2900CDBR**

Texas Instruments, Inc

SSOP28

**PCF8575PWR**

Texas Instruments, Inc

TSSOP24