

## 24-bit 48kHz Audio Codec

### Overview

The 24-bit 48kHz Audio Codec is for digital audio applications and includes a stereo ADC and DAC.

The stereo ADC and DAC operates at the sampling frequency (FS) of 8kHz to 48kHz. Both the recording path and playback path contain gain control.

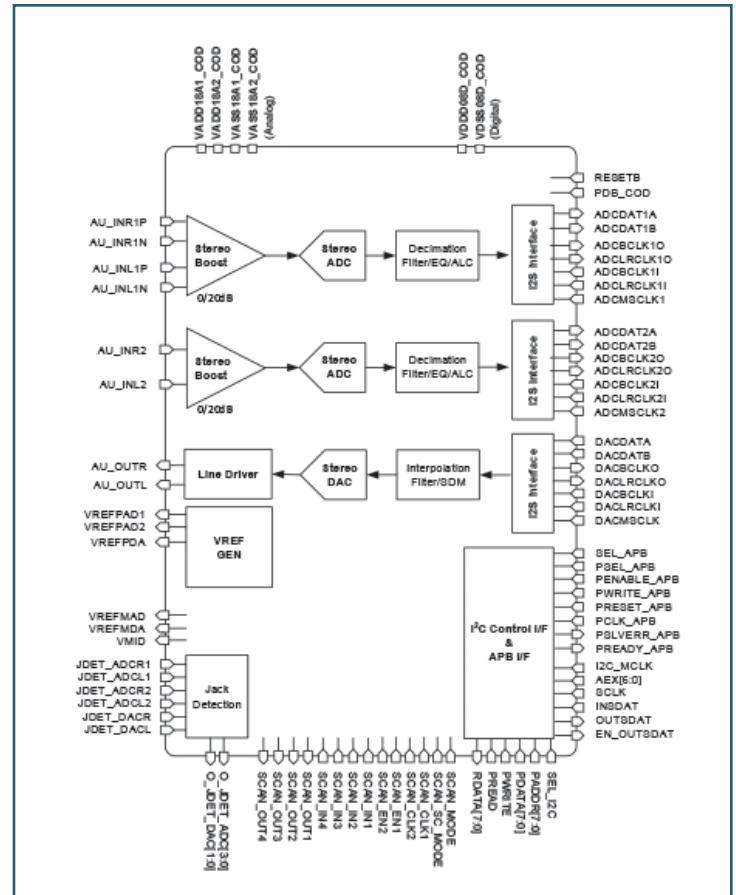
The ADC achieves a SNR of 93dB at 0dB gain and the DAC achieves a SNR of 95dB, over the in-band.

### Key Features

- 14nm low power CMOS device technology
- Dual power supply: 1.8V and 0.8V
- Operation junction temperature: -40°C to 125°C
- Resolution: 24-bit
- ADC input range:  $1V_{rms}$  @ differential input  
 $0.5V_{rms}$  @ single-ended input
- Input frequency: DC to 20kHz (@ $F_s = 48kHz$ )
- SNR: 93dB (ADC @ 0dB gain) / 95dB (DAC)

### Deliverables

- Datasheet
- User Guide
- Verilog model
- Timing DK
- CDL netlist
- Layout (GDSII or OAS)



### Applications

- Digital TV

# SAMSUNG Foundry

For more information, please contact us at [IP@silvaco.com](mailto:IP@silvaco.com).

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