



# AK4311A

## 16Bit $\Delta\Sigma$ DAC with Volume & Mixing Control

### General Description

The AK4311A is a 1bit stereo DAC with individually controllable channel volume for multimedia audio system. A 1bit DAC can achieve monotonicity and low distortion with no adjustment and is superior to traditional R-2R ladder based DACs. In the AK4311A, the loss of accuracy from clock jitter is also improved by using SCF techniques for on-chip post filter. The AK4311A includes continuous time filter with single end output and does not need any external parts. The AK4311A also has channel mixing function and meets ATAPI CD-ROM specification.

### Features

- 1bit  $\Delta\Sigma$  DAC
- Sampling Rate Ranging from 30kHz to 50kHz
- On chip Perfect filtering
  - 8 times FIR Interpolator
  - 2nd order SCF
  - 2nd order CTF
  - Total Response:  $\pm 0.5\text{dB}$  at 20kHz
- On chip Buffer with Single End Output
- Digital de-emphasis for 32, 44.1, 48kHz sampling
- On chip Individually controllable Channel Volume & Mixing Control
- Soft Mute
- Master Clock: 256fs or 384fs
- High Tolerance to Clock Jitter
- THD+N: -85dB
- Dynamic Range: 91dB
- Wide Voltage Operation: 3V~5.5V
- Small Package: 24pin SSOP

