



= Preliminary = **AK9232/33/34** Dual 18/16/14-Bit 1.1MSPS ZDS A/D Converter

General Description

The AK9232/33/34 are 18/16/14-bit 1.1MSPS ZDS* A/D converters. A polar coordinate calculation function is also integrated, and it reduces the load of DSP or microcomputer. The AK9232/33/34 are housed in a space-saving 24-pin QFN package.

* ZDS: Zero latency Delta Sigma

A ZDS A/D converter realizes ultrafast response of SAR with maintaining high accuracy conversion like a delta-sigma converter, based on AKM's accumulated experience and know-how in analog-digital LSI technology. It contributes to improve the speed and the accuracy of negative feedback system. A ZDS A/D converter can achieve small and high accurate motor systems.

Features

- Simultaneous Sampling 18/16/14-bit ZDS A/D Converter
- Sampling Rate: 1.1MSPS
- Differential Inputs
- S/N:

88 dBFS(Typ.)	at 20kHz Input	(AK9232)
87 dBFS(Typ.)	at 20kHz Input	(AK9233)
84 dBFS(Typ.)	at 20kHz Input	(AK9234)
- 18bit No Missing Code, INL: ± 2 LSB (Typ.) @Vin=-6dBFS (AK9232)
- 16bit No Missing Code, INL: ± 1 LSB (Typ.) @Vin=-6dBFS (AK9233)
- 14bit No Missing Code, INL: ± 0.5 LSB (Typ.) @Vin=-6dBFS (AK9234)
- Polar coordinate calculation function
- Offset/Gain adjustment function
- Power Consumption: 100mW/ch (fs= 1.1MSPS, VDD=1.8V, HVDD=5V, DRVDD=3V)
- Power Supply:

VDD : 1.7 ~ 2.0V
HVDD: 4.75 ~ 5.25V
DRVDD: 2.7 ~ 5.25V
- Operational Temperature Range (Ta): -40 ~ 105°C
- Small Package: 24-pin QFN (4mm x 4mm)

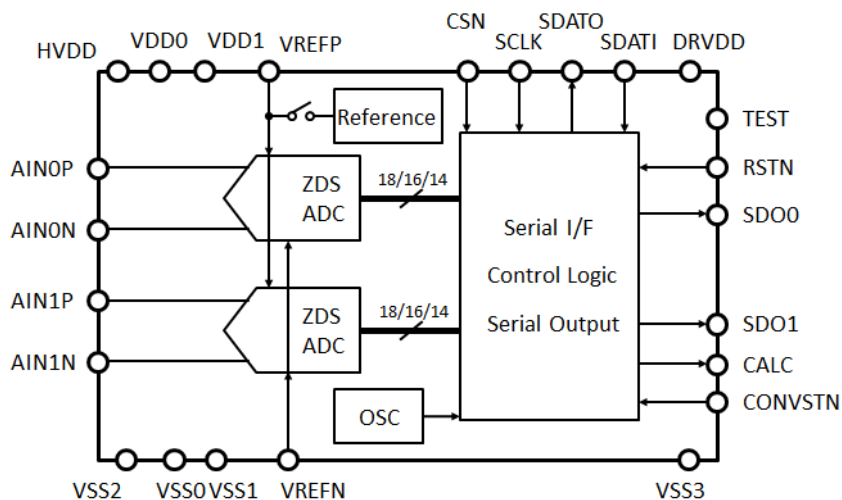


Figure 1. Block Diagram

Thank you for your access to AKM product information.

**More detail product information is available,
please contact our sales office or authorized distributors.**

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