

AS1524/AS1525

Micro-Power, 12-Bit, 150ksps, ADC, Single Ended or Differential

Product Brief

1 General Description

The AS1524/AS1525 are low-power, 12-bit analog-to-digital converters (ADCs) designed to operate with a single +2.7 to +5.25V supply. Excellent dynamic performance, low power consumption, and simplicity make these devices perfect for portable battery-powered data-acquisition applications.

The devices are available as the standard products listed in [Table 1](#).

Table 1. Standard Products

Model	Input Type	Input Voltage
AS1524	1-Channel, Pseudo / True-Differential	0 to VREF / -VREF/2 to VREF/2
AS1525	2-Channel, Single-Ended	0 to VREF

The devices feature a successive-approximation register (SAR), automatic shutdown, fast wakeup (1.4µs), and low-power consumption at the maximum sampling rate of 150ksps.

Automatic shutdown (0.2µA) between conversions results in reduced power consumption (at slower throughput rates).

Data access are made via an external clock through the SPI-/QSPI-/MICROWIRE-compatible 3-wire high-speed serial interface.

The AS1525/AS1524 are available in a 8-pin TDFN (3x3mm) package.

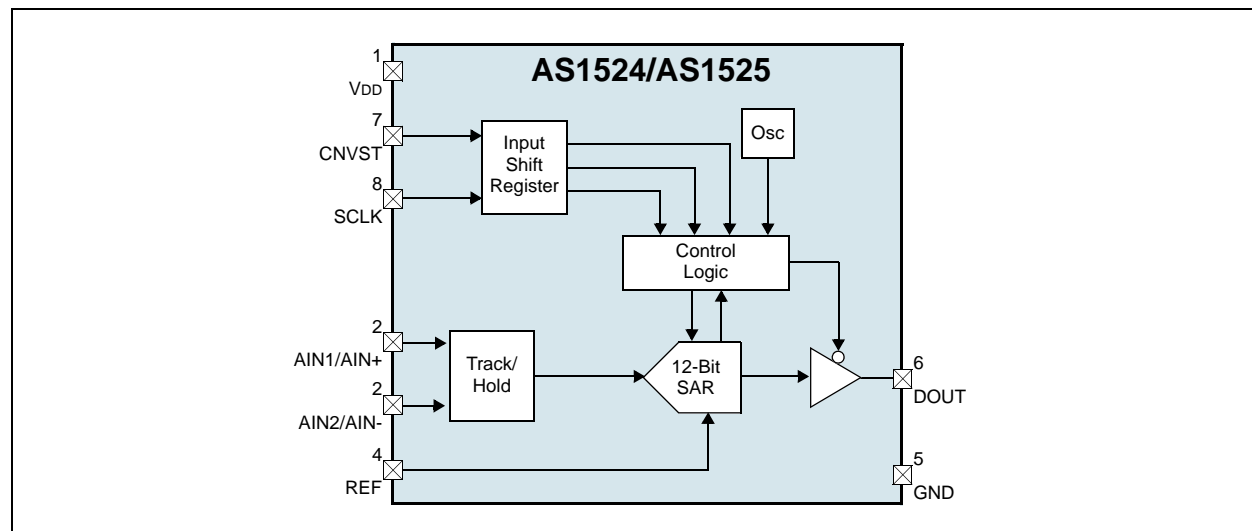
2 Key Features

- Single-Supply Operation: +2.7 to +5.25V
- Automatic Shutdown Between Conversions
- Low Power Consumption
 - 350µA @ 150ksps
 - 245µA @ 100ksps
 - 24µA @ 10ksps
 - 2.5µA @ 1ksps
 - 200nA in Automatic Shutdown Mode
- True-Differential Track/Hold, 150kHz Sampling Rate Software-Configurable Unipolar/Bipolar Conversion (AS1524)
- Input Common Mode Range from GND to VDD
- 3-Wire SPI-/QSPI-/MICROWIRE-Compatible Serial Interface
- Internal Conversion Clock
- 8-pin TDFN (3x3mm) Package

3 Applications

The devices are ideal for remote sensors, data-acquisition, data logging devices, lab instruments, or for any other space-limited A/D devices with low power consumption and single-supply requirements.

Figure 1. Block Diagram



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