

AS1534

Product Brief

12-bit, 8-Channel, Low-Power, 200ksp/s A/D Converter

1 General Description

The AS1534 is a low-power, 8-channel, 200ksp/s, 12-bit analog-to-digital (A/D) converter specifically designed to operate with single-supply devices. Superior AC characteristics, very low power-consumption, and highly-reliable packaging make the AS1534 perfect for battery-powered remote-sensor and data-acquisition devices.

The successive-approximation register (SAR), high-speed sampling, high-bandwidth track/hold circuitry, and configurable inputs combine to make the AS1534 highly-flexible and configurable.

Internal registers are used to control the AS1534 features, report on the status of the device, and hold the A/D conversion results.

The device requires very low supply-current at the 200ksp/s max sampling speed, and features flexible power-down modes to reduce power consumption at slower throughput rate.

The AS1534 operates from a single +3 to +3.6V supply and contains an internal 2.5V reference and integrated reference buffer. The device also supports an external reference.

Data accesses are made via the fast 8-/16-bit parallel interface in support of a wide range of microprocessors.

The AS1534 is available in a 44-pin PQFP package.

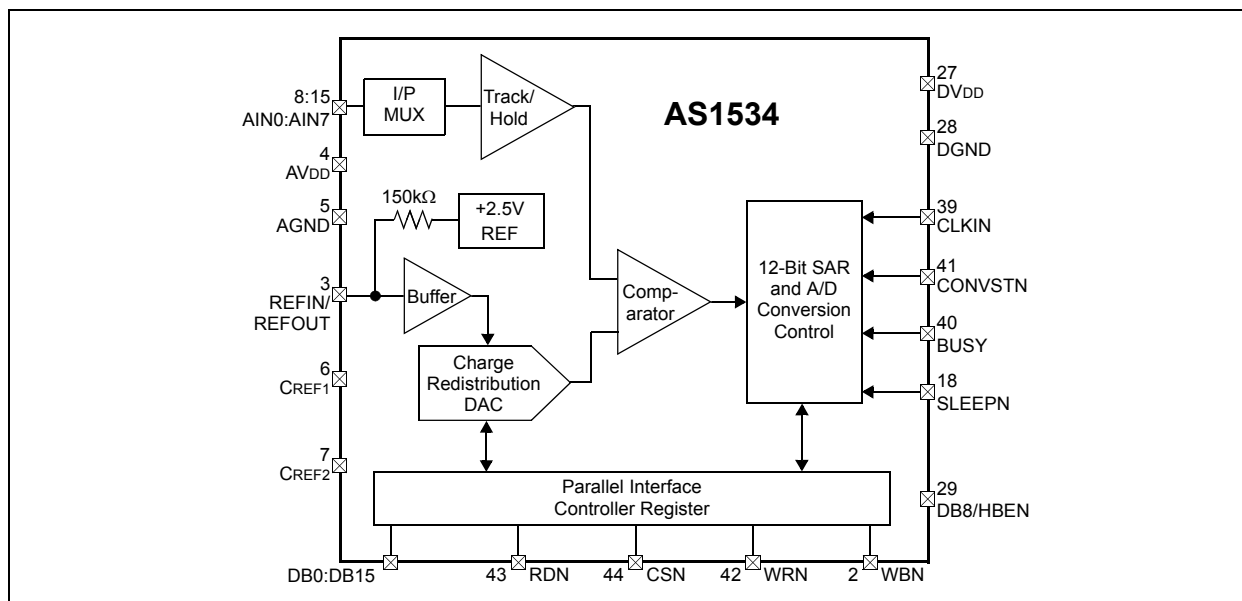
2 Key Features

- Sampling Rate: 200ksp/s
- 8- and 16-Bit Parallel Interface
- Analog Input Types:
 - 8-Channel Single-Ended
 - 4-Channel Pseudo-Differential
 - 4-Channel Fully-Differential
- Software-Configurable Unipolar or Bipolar Inputs
- Internal +2.5V Reference
- External Reference: 1.2V to V_{DD}
- Low-Power Operation:
 - 7.5mW (V_{DD} = 3 V)
 - 1.5mW (Using Automatic Power-Down after Conversion; V_{DD} = 3 V, 10ksp/s)
- Single-Supply Operation: +3 to +3.6V
- 44-pin PQFP Package

3 Applications

The device is ideal for remote sensors, data-acquisition and data-logging devices, pen-digitizers, process control, or any other space-limited A/D application with low power-consumption requirements.

Figure 1. Block Diagram



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