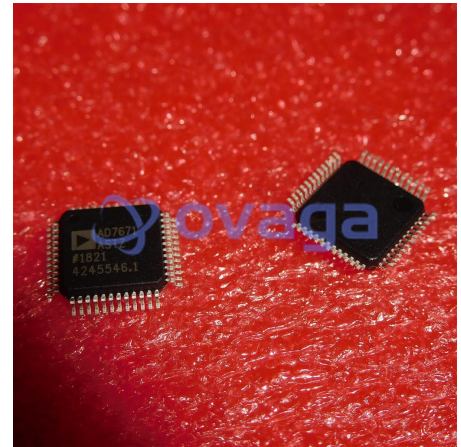


Analogue to Digital Converter, 16 bit, 1 MSPS, Differential, Parallel, Serial, Single, 4.75 V

Manufacturers	Analog Devices, Inc
Package/Case	LQFP48
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD7671ASTZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD7671 is a 16-bit, 1 MSPS, charge redistribution SAR, analog-to-digital converter that operates from a single 5 V power supply. It contains a high speed 16-bit sampling ADC, a resistor input scaler that allows various input ranges, an internal conversion clock, error correction circuits, and both serial and parallel system interface ports.

The AD7671 is hardware factory-calibrated and is comprehensively tested to ensure such ac parameters as signal-to-noise ratio (SNR) and total harmonic distortion (THD), in addition to the more traditional dc parameters of gain, offset, and linearity.

It features a very high sampling rate mode (Warp), a fast mode (Normal) for asynchronous conversion rate applications, and, for low power applications, a reduced power mode (Impulse) where the power is scaled with the throughput.

It is fabricated using Analog Devices' high performance, 0.6 micron CMOS process and is available in a 48-lead LQFP and a tiny 48-lead LFCSP, with operation specified from -40°C to +85°C.

Product Highlights

Fast ThroughputThe AD7671 is a very high speed (1 MSPS in Warp Mode and 800 kSPS in Normal Mode), charge redistribution, 16-bit SAR ADC.

Single-Supply OperationThe AD7671 operates from a single 5 V supply, dissipates only 112 mW typical, even lower when a reduced throughput is used with the reduced power mode (Impulse) and a powerdown mode.

Superior INLThe AD7671 has a maximum integral nonlinearity of 2.5 LSB with no missing 16-bit code.

Serial or Parallel InterfaceVersatile parallel (8 bits or 16 bits) or 2-wire serial interface arrangement compatible with both 3 V or 5 V logic.

Features

Throughput 1 MSPS (Warp Mode) 800 kSPS (Normal Mode)

INL: ± 2.5 LSB Max ($\pm 0.0038\%$ of Full Scale)

16-Bit Resolution with No Missing Codes

S/(N+D): 90 dB Typ @ 250 kHz

Analog Input Voltage Ranges Bipolar: ± 10 V, ± 5 V, ± 2.5 V Unipolar: 0 V to 10 V, 0 V to 5 V, 0 V to 2.5 V

THD: -100 dB Typ @ 250 kHz

Both AC and DC Specifications

No Pipeline Delay

Parallel (8/16 Bits) and Serial 5 V/3 V Interface

SPI®/QSPI™/MICROWIRE™/DSP Compatible

Single 5 V Supply Operation

Power Dissipation 12 mW Typical 15 μ W @ 100 SPS

Application

Data Acquisition

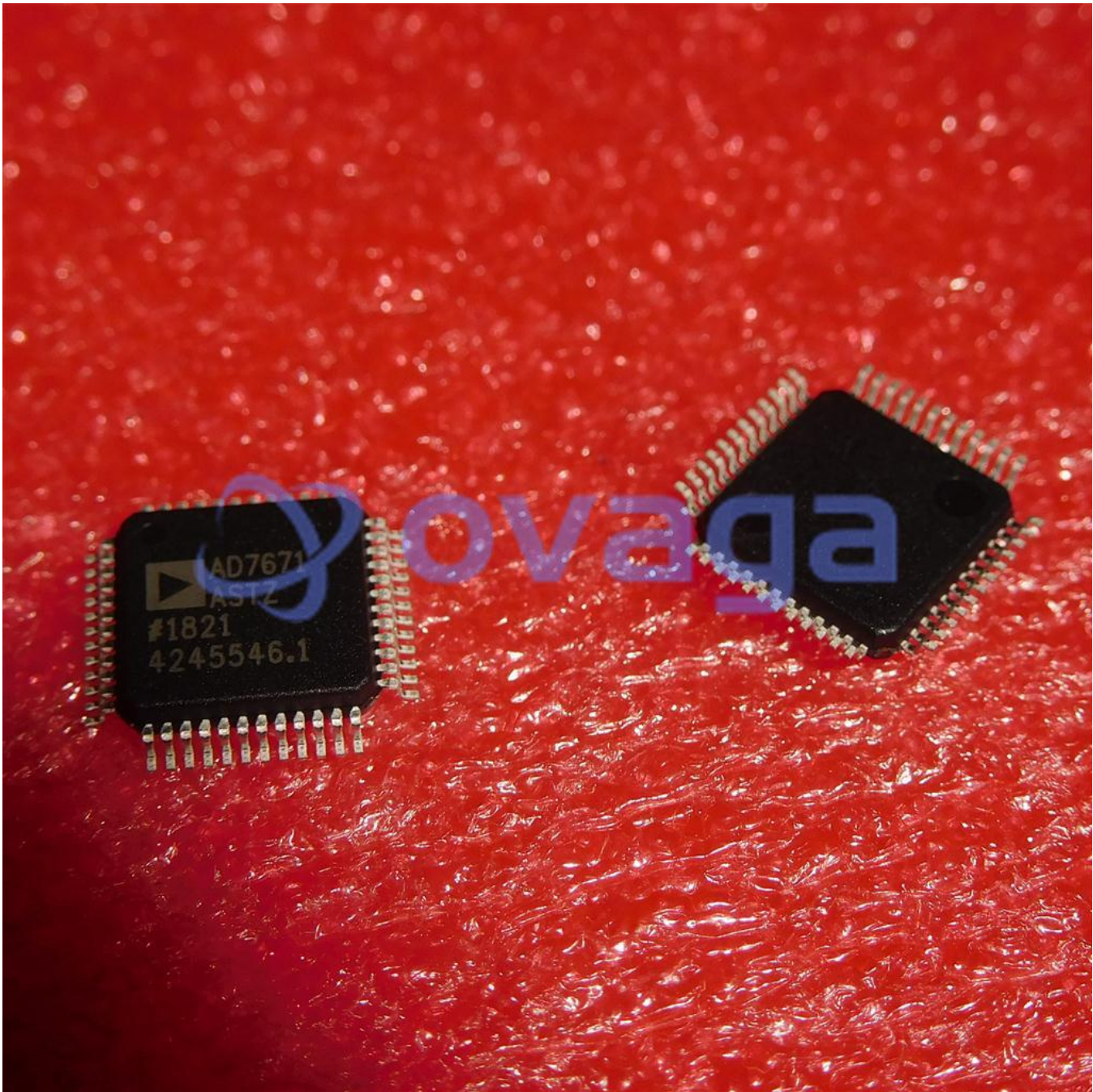
Communication

Instrumentation

Spectrum Analysis

Medical Instruments

Process Control

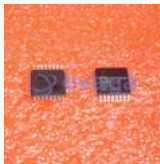


Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



[AD7266BSUZ](#)

Analog Devices, Inc
TQPF-32



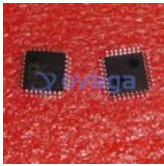
[AD574AJNZ](#)

Analog Devices, Inc
PDIP-28



[AD7401YRWZ](#)

Analog Devices, Inc
SOIC-16



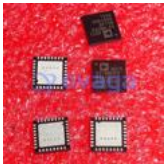
[AD7938BSUZ](#)

Analog Devices, Inc
TQFP-32



[AD7192BRUZ-REEL](#)

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TSSOP-24



[AD7124-8BCPZ-RL7](#)

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[AD9680BCPZ-500](#)

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LFCSP-64