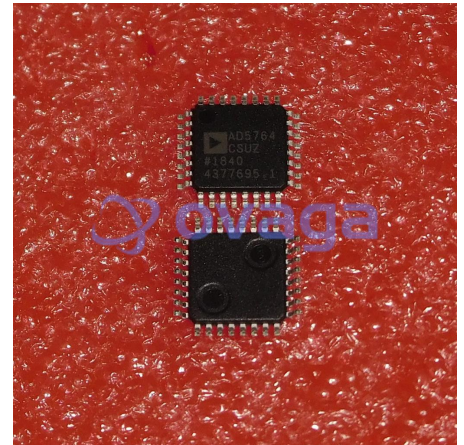


Digital to Analogue Converter, Quad, 16 bit, 1.26 MSPS, 3 Wire, Serial,  $\pm 11.4\text{V}$  to  $\pm 16.5\text{V}$ , QFP

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	TQFP32P
Product Type	Data Conversion ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for AD5764CSUZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD5764R is a quad, 16-bit, serial input, bipolar voltage output DAC that operates from supply voltages of  $\pm 11.4\text{ V}$  to  $\pm 16.5\text{ V}$ . Nominal full-scale output range is  $\pm 10\text{ V}$ . The AD5764R provides integrated output amplifiers, reference buffers, and proprietary power-up/power-down control circuitry. The part also features a digital I/O port, programmed via the serial interface, and an analog temperature sensor. The part incorporates digital offset and gain adjust registers per channel.

The AD5764R is a high performance converter that provides guaranteed monotonicity, integral nonlinearity (INL) of  $\pm 1\text{ LSB}$ , low noise, and  $10\ \mu\text{s}$  settling time. The AD5764R includes an on-chip  $5\text{ V}$  reference with a reference temperature coefficient of  $10\text{ ppm}/^\circ\text{C}$  maximum. During power-up when the supply voltages are changing,  $\text{VOUTx}$  is clamped to  $0\text{ V}$  via a low impedance path.

The AD5764R is based on the iCMOS® technology platform, which is designed for analog systems designers within industrial/instrumentation equipment OEMs who need high performance ICs at higher voltage levels. iCMOS enables the development of analog ICs capable of  $30\text{ V}$  and operation at  $\pm 15\text{ V}$  supplies, while allowing reductions in power consumption and package size, coupled with increased ac and dc performance.

The AD5764R uses a serial interface that operates at clock rates of up to  $30\text{ MHz}$  and is compatible with DSP and microcontroller interface standards. Double buffering allows the simultaneous updating of all DACs. The input coding is programmable to either twos complement or offset binary formats. The asynchronous clear function clears all data registers to either bipolar zero or zero scale, depending on the coding used. The AD5764R is ideal for both closed-loop servo control and open-loop control applications. The AD5764R is available in a 32-lead TQFP and offers guaranteed specifications over the  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$  industrial temperature range (see Figure 1 for the functional block diagram).

## Features

Complete quad, 16-bit digital-to-analog converters (DAC)

Programmable output range:  $\pm 10$  V,  $\pm 10.2564$  V, or  $\pm 10.5263$  V

Low noise: 60 nV/ $\sqrt{\text{Hz}}$

Settling time: 10  $\mu\text{s}$  maximum

Integrated reference buffers

Internal reference: 10 ppm/ $^{\circ}\text{C}$  maximum

On-chip die temperature sensor

Output control during power-up/brownout

Programmable short-circuit protection

Simultaneous updating via LDAC

Asynchronous CLR to zero code

Digital offset and gain adjust

See Data Sheet for Additional Information

## Application

Industrial automation

Open-/closed-loop servo control

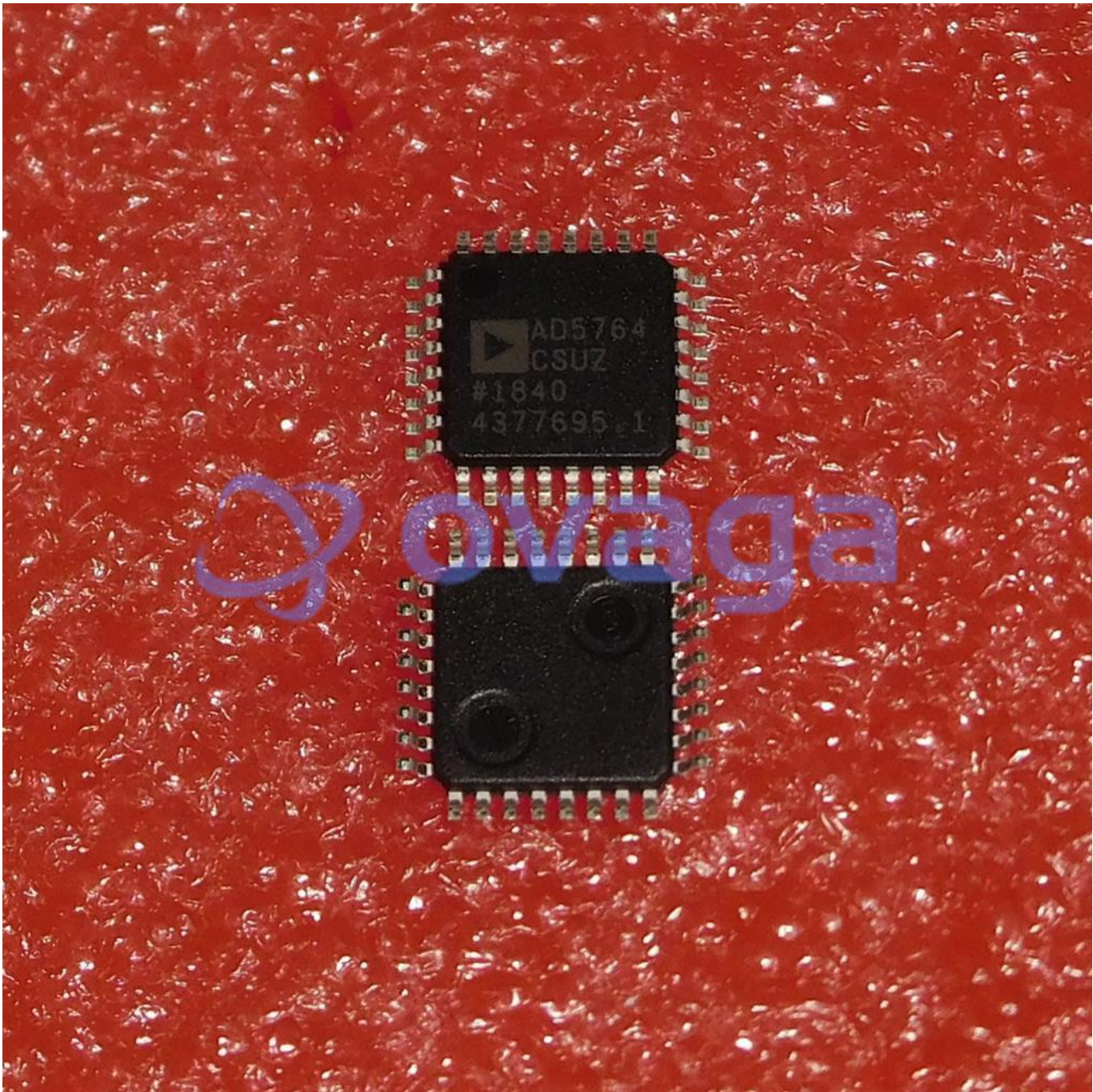
Process control

Data acquisition systems

Automatic test equipment

Automotive test and measurement

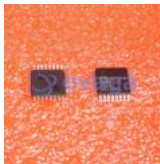
High accuracy instrumentation



### Related Products



[ADAS3022BCPZ](#)  
Analog Devices, Inc  
LFCSP-40



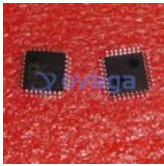
[AD7266BSUZ](#)  
Analog Devices, Inc  
TQPF-32



[AD574AJNZ](#)  
Analog Devices, Inc  
PDIP-28



[AD7401YRWZ](#)  
Analog Devices, Inc  
SOIC-16



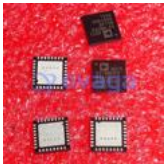
[AD7938BSUZ](#)

Analog Devices, Inc  
TQFP-32



[AD7192BRUZ-REEL](#)

Analog Devices, Inc  
TSSOP-24



[AD7124-8BCPZ-RL7](#)

Analog Devices, Inc  
LFCSP-32



[AD9680BCPZ-500](#)

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LFCSP-64