

Digital to Analog Converters - DAC IC 16-bit 4-CH w/ SPI INTERFACE

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	TSSOP-16
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD5686BRUZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD5686, a member of the nanoDAC+™ family, is a low power, quad, 16-bit buffered voltage output DAC. The device includes a gain select pin giving a full-scale output of  $2.5\text{ V} \times 2$ . The device operates from a single 2.7 V to 5.5 V supply, is guaranteed monotonic by design, and exhibits less than 0.1% FSR gain error and 1.5 mV offset error performance. The device is available in a 3 mm × 3 mm LFCSP and a TSSOP package.

The AD5686 also incorporates a power-on reset circuit and a RSTSEL pin that ensures that the DAC outputs power up to zero scale or midscale and remain at that level until a valid write takes place. Each part contains a per-channel power-down feature that reduces the current consumption of the device to 4 μA at 3 V while in power-down mode.

The AD5686 employs a versatile SPI interface that operates at clock rates up to 50 MHz, and all devices contain a VLOGIC pin intended for 1.8 V/3 V/5 V logic.

### Product Highlights

High Relative Accuracy (INL): ±2 LSB maximum

Excellent DC Performance. Total unadjusted error: ±0.1% of FSR maximum Offset error: ±1.5 mV maximum Gain error: ±0.1% of FSR maximum

Two Package Options: 3 mm × 3 mm, 16-lead LFCSP and 16-lead TSSOP

## Features

High relative accuracy (INL):  $\pm 2$  LSB maximum @ 16 bits

Tiny package: 3 mm  $\times$  3 mm, 16-lead LFCSP

Total unadjusted error (TUE):  $\pm 0.1\%$  of FSR maximum

Offset error:  $\pm 1.5$  mV maximum

Gain error:  $\pm 0.1\%$  of FSR maximum

High drive capability: 20 mA, 0.5 V from supply rails

User selectable gain of 1 or 2 (GAIN pin)

Reset to zero scale or midscale (RSTSEL pin)

1.8 V logic compatibility

50 MHz SPI with readback or daisy chain

Low glitch: 0.5 nV-sec

Low power: 1.8 mW at 3 V

2.7 V to 5.5 V power supply

## Application

Digital gain and offset adjustment

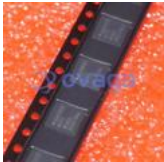
Programmable attenuators

Process control (PLC I/O cards)

Industrial automation

Data acquisition systems

## Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc  
LFCSP-40



[AD574AJNZ](#)

Analog Devices, Inc  
PDIP-28



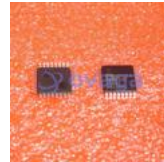
[AD7938BSUZ](#)

Analog Devices, Inc  
TQFP-32



[AD7124-8BCPZ-RL7](#)

Analog Devices, Inc  
LFCSP-32



[AD7266BSUZ](#)

Analog Devices, Inc  
TQPF-32



[AD7401YRWZ](#)

Analog Devices, Inc  
SOIC-16



[AD7192BRUZ-REEL](#)

Analog Devices, Inc  
TSSOP-24



[AD9680BCPZ-500](#)

Analog Devices, Inc  
LFCSP-64