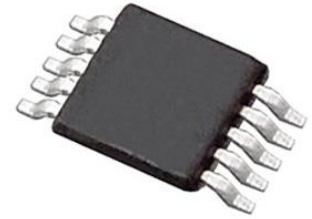


Digital to Analogue Converter, NANO Dual, 12 bit, 287 kSPS, 3 Wire, Serial, 4.5V to 5.5V, SOP

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	MSOP-10
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD5623RBRMZ-5 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD5623R/AD5643R/AD5663R, members of the nanoDAC® family, are low power, dual 12-, 14-, and 16-bit buffered voltage-out digital-to-analog converters (DAC) that operate from a single 2.7 V to 5.5 V supply and are guaranteed monotonic by design.

The AD5623R/AD5643R/AD5663R have an on-chip reference. The AD5623R-3/AD5643R-3/AD5663R-3 have a 1.25 V, 5 ppm/°C reference, giving a full-scale output of 2.5 V; and the AD5623R-5/AD5643R-5/AD5663R-5 have a 2.5 V, 5 ppm/°C reference, giving a full-scale output of 5 V. The on-chip reference is off at power-up, allowing the use of an external reference; and all devices can be operated from a single 2.7 V to 5.5 V supply. The internal reference is turned on by writing to the DAC.

The parts incorporate a power-on reset circuit that ensures the DAC output powers up to 0 V and remains there until a valid write takes place. The part contains a power-down feature that reduces the current consumption of the device to 480 nA at 5 V and provides software-selectable output loads while in power-down mode.

The low power consumption of this part in normal operation makes it ideally suited to portable, battery-operated equipment.

The AD5623R/AD5643R/AD5663R use a versatile, 3-wire serial interface that operates at clock rates up to 50 MHz, and they are compatible with standard SPI®, QSPI™, MICROWIRE™, and DSP interface standards. The on-chip precision output amplifier enables rail-to-rail output swing to be achieved.

### Product Highlights

Dual 12-, 14-, and 16-bit DAC.

On-chip 1.25 V/2.5 V, 5 ppm/°C reference.

Available in 10-lead MSOP and 10-lead, 3 mm × 3 mm LFCSP.

Low power; typically consumes 0.6 mW at 3 V and 1.25 mW at 5 V.

4.5 us maximum settling time for the AD5623R.

Applications  
Process control

Data acquisition systems

Portable battery-powered instruments

Digital gain and offset adjustment

Programmable voltage and current sources

Programmable attenuators

## Features

Low power, smallest pin-compatible, dual nanoDAC

AD5663R: 16 bits

AD5643R: 14 bits

AD5623R: 12 bits

User-selectable external or internal reference

External reference default

On-chip 1.25 V/2.5 V, 5 ppm/°C reference

10-lead MSOP and 3 mm × 3 mm LFCSP

2.7 V to 5.5 V power supply

Guaranteed monotonic by design

See data sheet for additional features

AD5623R-EP supports defense and aerospace applications (AQEC standard)

[Download\(pdf\)](#)

Extended temperature range: -55°C to +105°C

Controlled manufacturing baseline

One assembly/test site

One fabrication site

Enhanced product change notification

Qualification data available on request

V62/14633-01XE DSCC Drawing Number

## Application

Process control

Data acquisition systems

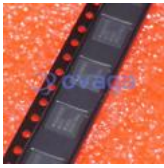
Portable battery-powered instruments

Digital gain and offset adjustment

Programmable voltage and current sources

Programmable attenuators

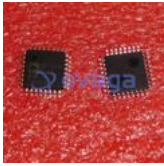
## Related Products



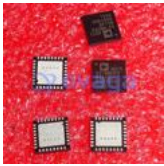
[ADAS3022BCPZ](#)  
Analog Devices, Inc  
LFCSP-40



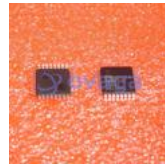
[AD574AJNZ](#)  
Analog Devices, Inc  
PDIP-28



[AD7938BSUZ](#)  
Analog Devices, Inc  
TQFP-32



[AD7124-8BCPZ-RL7](#)  
Analog Devices, Inc  
LFCSP-32



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[AD9680BCPZ-500](#)  
Analog Devices, Inc  
LFCSP-64