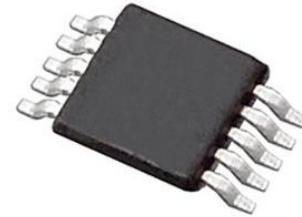


Quad, 12-/14-/16-Bit nanoDACs with 5 ppm/C On-Chip Reference

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



Images are for reference only

Please submit RFQ for AD5664RBRMZ-5 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD5624R/AD5644R/AD5664R, members of the *nanoDAC*<sup>®</sup> family, are low power, quad, 12-/14-/16-bit buffered voltage-out DACs. All devices operate from a single 2.7 V to 5.5 V supply and are guaranteed monotonic by design.

The AD5624R/AD5644R/AD5664R have an on-chip reference. The AD56x4R-3 has a 1.25 V, 5 ppm/°C reference, giving a full-scale output range of 2.5 V; the AD56x4R-5 has a 2.5 V, 5 ppm/°C reference giving a full-scale output range of 5 V. The on-chip reference is off at power-up, allowing the use of an external reference; all devices can be operated from a single 2.7 V to 5.5 V supply. The internal reference is enabled via a software write.

The part incorporates 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 per-channel 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 AD5624R/AD5644R/AD5664R use a versatile 3-wire serial interface that operates at clock rates up to 50 MHz, and is compatible with standard SPI, QSPI<sup>™</sup>, MICROWIRE<sup>™</sup>, and DSP interface standards. The on-chip precision output amplifier enables rail-to-rail output swing.

### Product Highlights

#### Applications

Quad 12-/14-/16-bit DACs.

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

Available in 10-lead MSOP; 10-lead, 3 mm × 3 mm LFCSP\_WD; and 12-ball, 1.665 mm × 2.245 mm WLCSP.

Low power, typically consumes 1.32 mW at 3 V and 2.25 mW at 5 V.

## Features

Low power, smallest pin-compatible, quad nanoDACs

AD5664R: 16 bits

AD5644R: 14 bits

AD5624R: 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; 10-lead, 3 mm × 3 mm LFCSP\_WD; and 12-ball, 1.665 mm × 2.245 mm WLCSP

2.7 V to 5.5 V power supply

Guaranteed monotonic by design

Power-on reset to zero scale

Per channel power-down

Serial interface, up to 50 MHz

## Application

Process controls

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



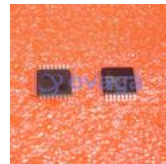
[AD7938BSUZ](#)

Analog Devices, Inc  
TQFP-32



[AD7124-8BCPZ-RL7](#)

Analog Devices, Inc  
LFCSP-32



[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