

Digital to Analog Converters - DAC 10-Bit 100 MSPS

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-28
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD9760ARZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD9760 and AD9760-50 are the 10-bit resolution members of the T×DAC series of high performance, low power CMOS digital-to-analog converters (DACs). The AD9760-50 is a lower performance option that is guaranteed and specified for 50 MSPS operation. The T×DAC family that consists of pin compatible 8-, 10-, 12- and 14-bit DACs is specifically optimized for the transmit signal path of communication systems. All of the devices share the same interface options, small outline package and pinout, thus providing an upward or downward component selection path based on performance, resolution and cost. Both the AD9760 and AD9760-50 offer exceptional ac and dc performance while supporting update rates up to 125 MSPS and 60 MSPS respectively.

The AD9760's flexible single-supply operating range of 2.7 V to 5.5 V and low power dissipation are well suited for portable and low power applications. Its power dissipation can be further reduced to a mere 45 mW without a significant degradation in performance by lowering the full-scale current output. Also, a power-down mode reduces the standby power dissipation to approximately 25 mW.

The AD9760 is manufactured on an advanced CMOS process. A segmented current source architecture is combined with a proprietary switching technique to reduce spurious components and enhance dynamic performance. Edge-triggered input latches and a 1.2 V temperature compensated bandgap reference have been integrated to provide a complete monolithic DAC solution. Flexible supply options support +3 V and +5 V CMOS logic families.

The AD9760 is a current-output DAC with a nominal full-scale output current of 20 mA and > 100 k(ohm) output impedance. Differential current outputs are provided to support single-ended or differential applications. Matching between the two current outputs ensures enhanced dynamic performance in a differential output configuration. The current outputs may be tied directly to an output resistor to provide two complementary, single-ended voltage outputs or fed directly into a transformer. The output voltage compliance range is 1.25 V.

The on-chip reference and control amplifier are configured for maximum accuracy and flexibility. The AD9760 can be driven by the on-chip reference or by a variety of external reference voltages. The internal control amplifier that provides a wide (>10:1) adjustment span allows the AD9760 full-scale current to be adjusted over a 2 mA to 20 mArange while maintaining excellent dynamic performance. Thus, the AD9760 may operate at reduced power levels or be adjusted over a 20 dB range to provide additional gain ranging capabilities.

The AD9760 is available in a 28-pin SOIC package. It is specified for operation over the industrial temperature range.

Features

Member of Pin-Compatible TxDAC Product Family

125 MSPS Update Rate

10-Bit Resolution

Excellent Spurious Free Dynamic Range Performance

SFDR to Nyquist @ 40 MHz Output: 52 dBc

Differential Current Outputs: 2 ma to 20 mA

Edge-Triggered Latches

Power Dissipation: 175 mW @ 5 V to 45 mW @ 3 V

Power-Down Mode: 25 mW @ 5 V

On-Chip 1.20 V Reference

Single +5 V or +3 V Supply Operation

Packages: 28-Lead SOIC and TSSOP

Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



[AD574AJNZ](#)

Analog Devices, Inc
PDIP-28



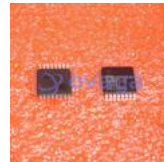
[AD7938BSUZ](#)

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