

DAC 2-CH Segment 10-bit 48-Pin LQFP Tray

Manufacturer: [Analog Devices, Inc](#)

Package/Case: LQFP-48

Product Type: Data Conversion ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active



Images are for reference only

[Inquiry](#)

General Description

The AD9763/AD9765/AD9767 have been optimized for processing I and Q data in communications applications. The digital interface consists of two double-buffered latches as well as control logic. Separate write inputs allow data to be written to the two DAC ports independent of one another. Separate clocks control the update rate of the DACs.

A mode control pin allows the AD9763/AD9765/AD9767 to interface to two separate data ports, or to a single interleaved high speed data port. In interleaving mode, the input data stream is demuxed into its original I and Q data and then latched. The I and Q data is then converted by the two DACs and updated at half the input data rate.

The GAINCTRL pin allows two modes for setting the full-scale current (IOUTFS) of the two DACs. IOUTFS for each DAC can be set independently using two external resistors, or IOUTFS for both DACs can be set by using a single external resistor. See the Gain Control Mode section for important date code information on this feature.

The DACs utilize a segmented current source architecture combined with a proprietary switching technique to reduce glitch energy and maximize dynamic accuracy. Each DAC provides differential current output, thus supporting single-ended or differential applications. Both DACs of the AD9763, AD9765, or AD9767 can be simultaneously updated and can provide a nominal full-scale current of 20 mA. The full-scale currents between each DAC are matched to within 0.1%.

The AD9763/AD9765/AD9767 are manufactured on an advanced, low cost CMOS process. They operate from a single supply of 3.3 V to 5 V and consume 380 mW of power.

Product Highlights

The AD9763/AD9765/AD9767 are members of a pin-compatible family of dual Tx DACs providing 8-, 10-, 12-, and 14-bit resolution.

Dual 10-/12-/14-Bit, 125 MSPS DACs. A pair of high performance DACs for each part is optimized for low distortion performance and provides flexible transmission of I and Q information.

Matching. Gain matching is typically 0.1% of full scale, and offset error is better than 0.02%.

Low Power. Complete CMOS dual DAC function operates on 380 mW from a 3.3 V to 5 V single supply. The DAC full-scale current can be reduced for lower power operation, and a sleep mode is provided for low power idle periods.

On-Chip Voltage Reference. The AD9763/AD9765/AD9767 each include a 1.20 V temperature-compensated band gap voltage reference.

Dual 10-/12-/14-Bit Inputs. The AD9763/AD9765/AD9767 each feature a flexible dual-port interface, allowing dual or interleaved input data.

Key Features

10-/12-/14-bit dual transmit digital-to-analog converters (DACs)

125 MSPS update rate

Excellent SFDR to Nyquist @ 5 MHz output: 75 dBc

Excellent gain and offset matching: 0.1%

Fully independent or single-resistor gain control

Dual-port or interleaved data

On-chip 1.2 V reference

5 V or 3.3 V operation

Power dissipation: 380 mW @ 5 V

Power-down mode: 50 mW @ 5 V

48-lead LQFP

Application

Communications

Base stations

Digital synthesis

Quadrature modulation

3D ultrasound

Recommended For You

AD7305BRZ

Analog Devices, Inc

SOP20

AD9910BSVZ

Analog Devices, Inc

TQFP100

AD9831ASTZ

Analog Devices, Inc

QFP

AD5447YRUZ

Analog Devices, Inc

TSSOP

AD5302BRMZ

Analog Devices, Inc

MSOP10

AD5531BRUZ

Analog Devices, Inc

TSSOP16

AD537JH

Analog Devices, Inc

CAN10

AD652AQ

Analog Devices, Inc

DIP

AD654JN

Analog Devices, Inc

DIP8

AD7740YRMZ

Analog Devices, Inc

MSOP8

AD9914BCPZ

Analog Devices, Inc

LFCSP

AD73311ARSZ

Analog Devices, Inc

SSOP20

AD7291BCPZ

Analog Devices, Inc

LFCSP20

AD9954YSVZ

Analog Devices, Inc

QFP

AD2S1205YSTZ

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LQFP44