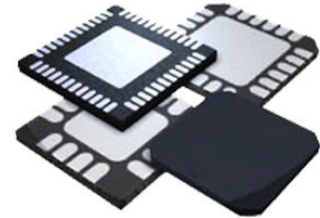


## DAC 2-CH Segment 16-bit 64-Pin VQFN EP T/R



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** QFN

**Product Type:** Data Conversion ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The DAC5682Z is a dual-channel 16-bit 1.0 GSPS DAC with wideband LVDS data input, integrated 2x/4x interpolation filters, onboard clock multiplier, and internal voltage reference. The DAC5682Z offers superior linearity, noise, crosstalk, and PLL phase noise performance.

The DAC5682Z integrates a wideband LVDS port with on-chip termination. Full-rate input data can be transferred to a single DAC channel, or half-rate and 1/4-rate input data can be interpolated by onboard 2x or 4x FIR filters. Each interpolation FIR is configurable in either low-pass or high-pass mode, allowing selection of a higher order output spectral image. An on-chip delay lock loop (DLL) simplifies LVDS interfacing by providing skew control for the LVDS input data clock.

The DAC5682Z allows both complex or real output. An optional  $F_s/4$  coarse mixer in complex mode provides coarse frequency upconversion and the dual DAC output produces a complex Hilbert Transform pair. An external RF quadrature modulator then performs the final single sideband up-conversion. The interpolation filters and complex coarse mixers efficiently provide frequency plan flexibility while enabling higher output DAC rates to simplify image rejection filtering.

The DAC5682Z is characterized for operation over the industrial temperature range of 40°C to 85°C and is available in a 64-pin QFN package. Other single-channel members of the family include the interpolating DAC5681Z and the noninterpolating DAC5681.

## Key Features

1.0 GPS Update Rate

16-Bit Wideband Input LVDS Data Bus

8 Sample Input FIFO

Interleaved I/Q Data for Dual-DAC Mode

High Performance

73-dBc ACLR WCDMA TM1 at 180 MHz

2x-32x Clock Multiplying PLL/VCO

2x or 4x Interpolation Filters

Stopband Transition 0.4 to 0.6 Fdata

Filters Configurable in Either Low-Pass or High-Pass

Mode Allows Selection of Higher Order Image

Fs/4 Coarse Mixer

On-Chip 1.2-V Reference

Differential Scalable Output: 2 to 20 mA

Package: 64-Pin 9-mm × 9-mm QFN

## APPLICATIONS

Cellular Base Stations

Broadband Wireless Access (BWA)

WiMAX 802.16

Fixed Wireless Backhaul

Cable Modem Termination System (CMTS)

## Recommended For You

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### **DAC6578SPW**

Texas Instruments, Inc

TSSOP-16

### **DAC7802KU**

Texas Instruments, Inc

SOP24

### **DAC122S085C1MM/NOPB**

Texas Instruments, Inc

MSOP10

### **DAC0800LCM**

Texas Instruments, Inc

SOP16

### **DAC1220E**

Texas Instruments, Inc

SSOP16

### **DAC7625U**

Texas Instruments, Inc

SOP28

**DAC38J84IAAV**

Texas Instruments, Inc  
BGA

**DAC8043U**

Texas Instruments, Inc  
SOP8

**DAC7734E**

Texas Instruments, Inc  
SSOP48

**DAC712UB**

Texas Instruments, Inc  
SOP28

**DAC7634E**

Texas Instruments, Inc  
SSOP48

**DAC712UK**

Texas Instruments, Inc  
SOP28

**DAC7614UB**

Texas Instruments, Inc  
SOP16

**DAC108S085CIMI/NOPB**

Texas Instruments, Inc  
TSSOP-16

**DAC8164IAPW**

Texas Instruments, Inc  
TSSOP