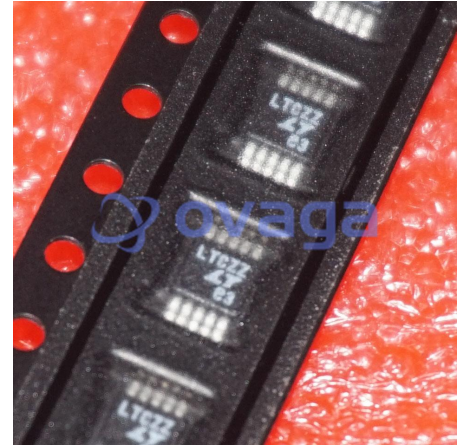


12-Bit Vout DAC in 3mm x 3mm DFN; Package: MSOP; No of Pins: 10; Temperature Range: 0°C to +70°C

Manufacturers	Analog Devices, Inc
Package/Case	10MSOP
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for LTC2642CMS-16#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC2641/LTC2642 are families of 16-, 14- and 12-bit unbuffered voltage output DACs. These DACs operate from a single 2.7V to 5.5V supply and are guaranteed monotonic over temperature. The LTC2641A-16/LTC2642A-16 provide 16-bit performance (± 1 LSB INL and ± 1 LSB DNL) over temperature. Unbuffered DAC outputs result in low supply current of 120 μ A and a low offset error of ± 1 LSB.

Both the LTC2641 and LTC2642 feature a reference input range of 2V to V_{DD} . V_{OUT} swings from 0V to V_{REF} . For bipolar operation, the LTC2642 includes matched scaling resistors for use with an external precision op amp (such as the LT1678), generating a $\pm V_{REF}$ output swing at R_{FB} .

The LTC2641/LTC2642 use a simple SPI/MICROWIRE compatible 3-wire serial interface which can be operated at clock rates up to 50MHz and can interface directly with optocouplers for applications requiring isolation. A power-on reset circuit clears the LTC2641's DAC output to zero scale and the LTC2642's DAC output to midscale when power is initially applied. A logic low on the CLR pin asynchronously clears the DAC to zero scale (LTC2641) or midscale (LTC2642). These DACs are all specified over the commercial and industrial ranges.

Applications

Features

Tiny 3mm × 3mm 8-Pin DFN Package

Maximum 16-Bit INL Error: ±1LSB over Temperature

Low 120µA Supply Current

Guaranteed Monotonic over Temperature

Low 0.5nV•sec Glitch Impulse

2.7V to 5.5V Single Supply Operation

Fast 1µs Settling Time to 16 Bits

Unbuffered Voltage Output Directly Drives 60k Loads

50MHz SPI™/QSPI™/MICROWIRE™ Compatible Serial Interface

Power-On Reset Clears DAC Output to Zero Scale(LTC2641) or Midscale (LTC2642)

Schmitt-Trigger Inputs for Direct Optocoupler Interface

Asynchronous

CLR

8-Lead MSOP, 3mm × 3mm DFN, and 8-Lead SO Packages (LTC2641)

10-Lead MSOP and 3mm × 3mm DFN Packages (LTC2642)

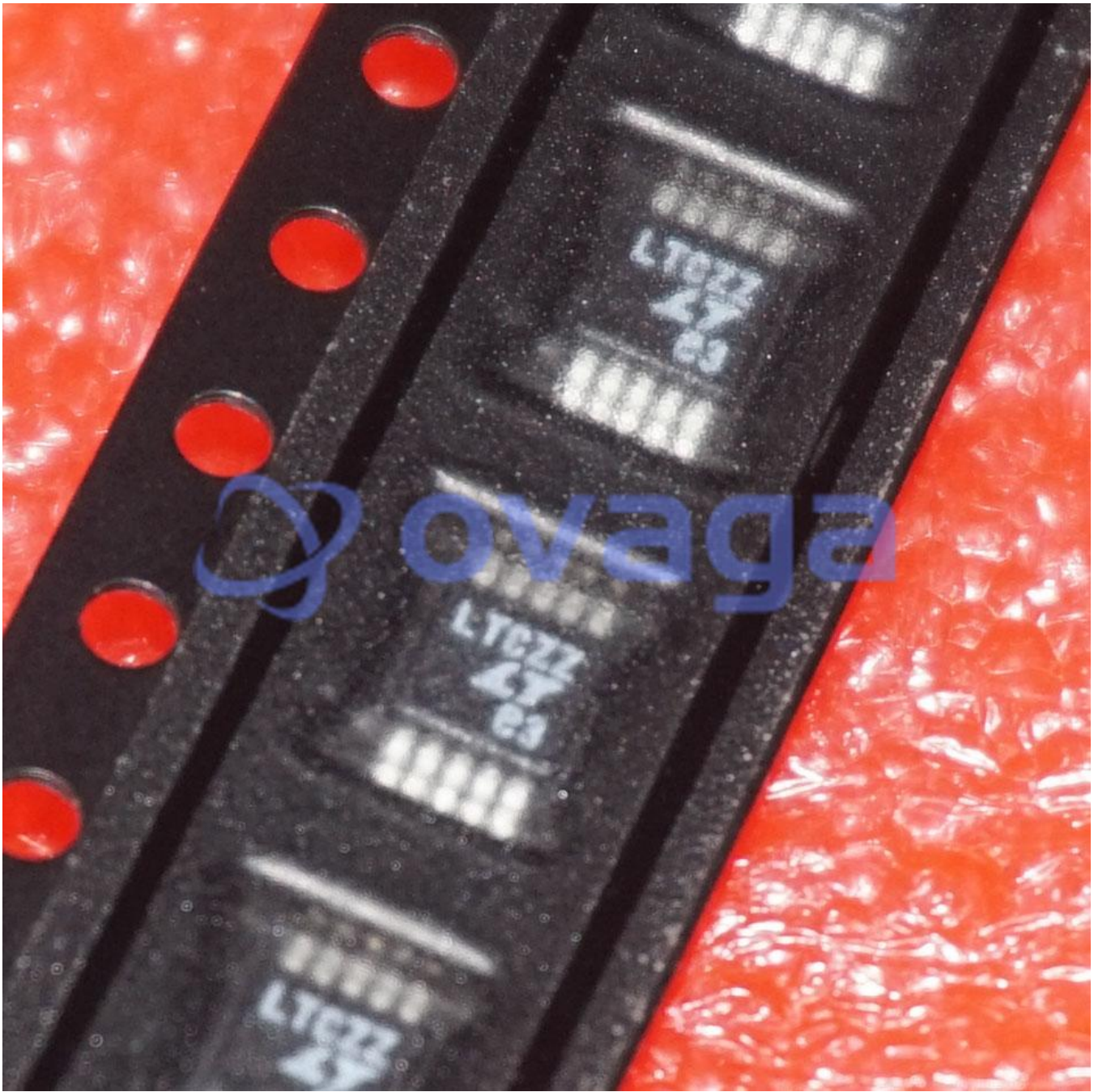
Application

High Resolution Offset and Gain Adjustment

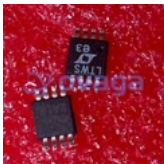
Process Control and Industrial Automation

Automatic Test Equipment

Data Acquisition Systems



Related Products



[LTC1860IMS8#PBF](#)

Analog Devices, Inc
MSOP-8



[LT1171CQ](#)

Analog Devices, Inc
TO-263



[LTC2351IUH-14#PBF](#)

Analog Devices, Inc
QFN-32



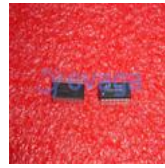
[LTC2600CGN#PBF](#)

Analog Devices, Inc
SSOP16



[LTC2485IDD#PBF](#)

Analog Devices, Inc
DFN-10



[LTC2418IGN#PBF](#)

Analog Devices, Inc
SSOP28



[LTC1865AIMS#PBF](#)

Analog Devices, Inc
MSOP-1



[LTC2203IUK](#)

Analog Devices, Inc
QFN48