16-Bit Octal DAC with 10ppm/°C (Max) Internal Reference

The 16-bit LTC®2656 combines eight voltage output DACs with guaranteed ±4LSB INL and ±1LSB DNL, and achieves ultralow AC and DC crosstalk to ensure rock-solid control in precision multichannel open or closed loop systems. The complete family of quad and octal DACs integrates a precision 1.25V or 2.048V reference that achieves 2ppm/°C typical and 10ppm/°C maximum temperature coefficient. The ±4LSB (max) INL, ±2mV (max) offset error and ±0.1% (max) gain error DC specifications ensure you’re designing with the industry’s best unipolar DACs.

Features
- Internal Precision Reference: 1.25V or 2.048V, 2ppm/°C (Typ), 10ppm/°C (Max)
- Maximum INL Error: ±4LSB at 16 Bits
- 2.7V to 5.5V Supply Range
- Ultralow Crosstalk Between DACs (<1nV•s)
- −40°C to 85°C Temperature Range
- Power-on Reset to Zero-Scale or Mid-Scale
- SPI or I²C Interfaces

Applications
- Mobile Communications
- Process Control and Industrial Automation
- Instrumentation
- Automatic Test Equipment
- Automotive

### Features

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### Package
- 16-Bit: 4mm × 4mm QFN-20 Narrow SSOP-16
- 12-Bit: 4mm × 4mm QFN-20 Narrow SSOP-16
- Octal SPI: 4mm × 5mm QFN-20 TSSOP-20
- Octal I²C: 4mm × 5mm QFN-20 TSSOP-20
Tiny 12-Bit Octal DAC with 10ppm/°C Internal Reference

The LTC2636 DAC family includes singles, duals, quads and octals with ordering options for 12-/10-/8-bit resolution, internal 2.5V or 4.096V, 10ppm/°C typical reference, SPI or I2C interface, power-on reset to zero- or mid-scale, and commercial, industrial or automotive guaranteed temperature specifications. The smallest solution available on the market today, these DACs are ideal for industrial, optical networking and automotive applications.

Features
- Internal Precision Reference:
  - 2.5V Full-Scale, 10ppm/°C (LTC2636-L)
  - 4.096V Full-Scale, 10ppm/°C (LTC2636-H)
- 2.7V to 5.5V Supply Range
- ±2.5LSB (Max) INL, ±1LSB (Max) DNL
- ±5mV Offset Error, ±0.8%FS Gain Error
- Ultralow Crosstalk Between DACs
- Low Noise: 0.75mV P-P 0.1Hz to 200kHz
- Power-on Reset to Zero-Scale or Mid-Scale
- Double-Buffered Data Latches
- Guaranteed Operation Over –40°C to 125°C

The LTC®2636 DAC family includes singles, duals, quads and octals with ordering options for 12-/10-/8-bit resolution, internal 2.5V or 4.096V, 10ppm/°C typical reference, SPI or I²C interface, power-on reset to zero- or mid-scale, and commercial, industrial or automotive guaranteed temperature specifications. The smallest solution available on the market today, these DACs are ideal for industrial, optical networking and automotive applications.

Low Glitch 16-Bit Unbuffered V_OUT DAC

The unipolar LTC®2641 and bipolar LTC®2642 are a family of unbuffered 16-/14-/12-bit V_OUT DACs. They are low power, fast settling and extremely low glitch DACs that are ideal for AC applications such as waveform generation. With their low offset and drift specifications, the LTC2641/LTC2642 can be used in precision DC positioning systems, gain and offset adjustment applications, ATE and data acquisition systems.

Features
- Low 0.5nV•s Glitch Impulse
- Low 120μA Supply Current
- Fast 1μs Settling Time to 16 Bits
- ±1LSB (Max) INL at 16 Bits, Guaranteed Monotonic
- 2.7V to 5.5V Single Supply Operation
- Power-on Reset Zero-Scale (LTC2641)/Mid-Scale (LTC2642)
- Unbuffered Voltage Output Directly Drives 60k Loads
- 50MHz SPI Compatible Interface

www.linear.com/2656  •  1-800-4-LINEAR