



## **16-Channel, 16-Bit $\pm 10\text{V}$ SoftSpan DAC Drives 10mA & 1000pF Loads**

MILPITAS, CA – June 16, 2014 – Linear Technology Corporation introduces the [LTC2668-16](#), a 16-channel, 16-bit voltage output digital-to-analog converter (DAC) with SoftSpan™ outputs, each of which can be independently configured for one of five selectable unipolar and bipolar output ranges up to  $\pm 10\text{V}$ . Each rail-to-rail DAC output is capable of sourcing or sinking 10mA with guaranteed load regulation and is stable driving capacitive loads as large as 1000pF. This makes the LTC2668 ideal for driving a variety of demanding loads in applications such as optical modules, programmable logic controllers (PLCs), MRI and X-ray imaging, automatic test equipment, laser etch equipment, spectrum analyzers and oscilloscopes.

The LTC2668 offers many space-saving features in a compact 6mm x 6mm QFN package, nearly 50% smaller footprint than alternative 16-channel DACs. The LTC2668 can be operated from a single 5V supply, or from dual bipolar supplies depending on the output voltage range requirement. The device includes a precision 2.5V 10ppm/°C max reference to generate the five SoftSpan output ranges, or it can be driven with an external reference. A convenient 16:1 high voltage analog multiplexer enables the user to monitor circuit integrity or perform in-circuit calibration, saving significant board real estate. The LTC2668 also supports an A/B toggle function for generating an AC bias or for applying dither to a system. Configuration of the LTC2668 is handled via an SPI-compatible serial interface which can be powered from an independent 1.8V to 5V digital supply.

The LTC2668 is offered in both 16-bit and 12-bit versions and is available today in commercial, industrial and automotive ( $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ ) temperature grades. Pricing begins at \$31.25 each for the LTC2668-16 and \$25.75 each for the LTC2668-12 in 1,000-piece quantities. The DC2025A evaluation board for the LTC2668 family is available at [www.linear.com/demo](http://www.linear.com/demo) or via a local Linear Technology sales office. The demo board is supported by the Linduino™ firmware development system, using the DC2026A. For more information, visit [www.linear.com/product/LTC2668](http://www.linear.com/product/LTC2668) and [www.linear.com/solutions/linduino](http://www.linear.com/solutions/linduino)


**Photo Caption:** 16-Bit, 16-Channel DAC in 6mm x 6mm QFN

### Summary of Features: LTC2668

- Precision Integrated Reference 10ppm/°C Max
- Independently Programmable Output Ranges: 0V to 5V, 0V to 10V,  $\pm 2.5V$ ,  $\pm 5V$ ,  $\pm 10V$
- Full 16-Bit/12-Bit Resolution at All Ranges
- Maximum INL Error:  $\pm 4LSB$  at 16 Bits
- A/B Toggle via Software or Dedicated Pin
- 16:1 Analog Multiplexer
- Guaranteed Monotonic Over Temperature
- Asynchronous DAC Update Pin
- Internal or External Reference
- Outputs Drive  $\pm 10mA$  Guaranteed
- 1.8V to 5V SPI Serial interface
- 6mm x 6mm 40-Lead QFN Package

### About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

 , LT, LTC, LTM, Linear Technology, the Linear logo and  $\mu$ Module are registered trademarks and SoftSpan is a trademark of Linear Technology Corp. All other trademarks are the property of their respective owners.

#### Press Contacts:

##### North America / Worldwide

John Hamburger, Director Marketing  
Communications  
[jhamburger@linear.com](mailto:jhamburger@linear.com)  
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager  
[ddickinson@linear.com](mailto:ddickinson@linear.com)  
Tel: 408-432-1900 ext 2233

##### UK & Nordic

Alan Timmins  
[alan@ezwire.com](mailto:alan@ezwire.com)  
Tel: +44-1-252-629937