



50Msps, 16-Bit DAC Demonstration Board Has Mojo

MILPITAS, CA – September 14, 2016 – Linear Technology Corporation introduces demonstration circuit 2459A, featuring the [LTC1668](#), 50Msps, 16-bit digital-to-analog converter (DAC). This high performance DAC is very popular in applications with analog frequency content between the audio range and several megahertz.

DC2459A is a complete redesign of the original demonstration circuit. Several signal conditioning options are available for the analog output, and digital signals may be provided by one of several low cost, easy to use FPGA development boards. Example FPGA code is provided, which produces digital sine wave data for the DAC.

Demonstration boards for semiconductor products enable synergy between the “Maker” community and production designs. A 50Msps DAC requires a carefully laid out board, and a digital signal source to go with it. A benchtop digital pattern generator is the tool of choice, but is an expensive proposition if you don’t own one and you just need to evaluate a DAC. Fortunately, there are a number of boards from the Maker community that provide just the right mix of capability, ease of use and low cost. Boards such as DC2459A provide Makers with access to true high performance devices, example code, and a well laid out PC board for projects and prototyping.

One of the digital connectors on DC2459A is directly compatible with the popular “Mojo” Spartan 6 FPGA board from Embedded Micro. The Mojo also features an onboard ATmega32U4 processor with Arduino bootloader, providing options for controlling the LTC1668, or leveraging Linduino[®] code (<http://www.linear.com/solutions/linduino>) to add additional analog and mixed-signal functionality.

Summary of Features: LTC1668

- High Performance, 50Msps DAC with 87dB Spurious Free Dynamic Range at 1MHz f_{OUT}
- Compatible with Embedded Micro Mojo FPGA Development Board
- Compatible with Numato Mimas FPGA Development Board
- Compatible with Altera DE0-Nano FPGA Development Board

- Compatible with 3.3V HSMC FPGA Boards
 - A Version, >1MHz Output Frequency, $\pm 1V$
 - B Version, 2.5MHz Lowpass Filter, $\pm 500mV$ Differential Output
 - C Version, $\leq 10kHz$ Output Frequency, $\pm 10V$
- QuikEval™ Header Facilitates Controlling the FPGA from a Linduino, or Adding Additional Functionality through QuikEval Compatible Demo Boards.


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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, μ Module® subsystems, and wireless sensor network products. For more information, visit www.linear.com

About Embedded Micro

Embedded Micro has been working to make FPGAs easier to use for four years. Their products focus on ease of use with accompanying tutorials and tools designed for both beginners and professionals. For more information, visit (<https://embeddedmicro.com/>)

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Press Contacts:

Embedded Micro Worldwide

Justin Rajewski
justin@embeddedmicro.com
Tel: 310-781-7800

Linear Technology
North America / Worldwide
John Hamburger, Director Marketing
Communications
jhamburger@linear.com
Tel: 408-432-1900 ext 2419

UK & Nordic
Alan Timmins
alan@ntlworld.com
Tel: +44-1-252-629937

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
Tel: 408-432-1900 ext 2233