



## **17V, 4MHz, Dual 3.5A Synchronous Buck with Spread Spectrum Modulation Reduces EMI in a Compact 3mm x 5mm QFN**

MILPITAS, CA & NORWOOD, MA – June 27, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC7124](#), a high efficiency, 4MHz synchronous dual output buck regulator that incorporates a constant frequency, peak current mode architecture. Optional spread spectrum frequency modulation is integrated for reducing radiated and conductive EMI noise. The device can deliver up to 3.5A of continuous output current from each channel or generate a 2-phase single output up to 7A in a compact 3mm x 5mm footprint package. The switching frequency is user programmable from 500kHz to 4MHz, enabling the use of tiny, low cost capacitors and inductors; also included is external clock synchronization capability for noise-sensitive applications. The LTC7124 operates from an input voltage of 3.1V to 17V with an output voltage range of 0.6V to 99% of  $V_{IN}$ , with high  $\pm 1\%$   $V_{OUT}$  accuracy, ideal for 1-4 cell Li-Ion applications as well as 5V and 12V intermediate bus systems. Other key applications include battery-powered systems, point-of-load supplies, portable instruments and handheld scanners.

Each channel of the LTC7124 uses internal N-channel MOSFET switches with  $R_{DS(ON)}$  of only 80m $\Omega$  and 40m $\Omega$  to deliver efficiencies as high as 95%. The two channels run 180 degrees out-of-phase, minimizing the size of both input and output capacitance. User-selectable Burst Mode<sup>®</sup> operation is used to maximize light load efficiency, requiring only 8 $\mu$ A with both channels enabled and only 5.5 $\mu$ A of quiescent current with one channel enabled. For applications requiring the lowest possible noise, the LTC7124 can be configured to run in forced continuous operation, reducing output voltage ripple and potential RF interference. Additional features include input overvoltage and overtemperature protection, power good voltage monitors, independent soft-start capability for each channel, internal or external loop compensation, programmable current limit and short-circuit protection.

The LTC7124 is available in a thermally enhanced 3mm x 5mm QFN-24 package. E- and I-grade versions are guaranteed to operate over the  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  operating junction temperature. The E-grade is priced starting at \$4.05 each in 1,000-piece quantities. All versions are available from stock. For more information, visit [www.linear.com/product/LTC7124](http://www.linear.com/product/LTC7124).

**Photo Caption:** Dual 3.5A, 17V Synchronous Step-Down DC/DC Converter in 3mm x 5mm QFN Package

### Summary of Features: LTC7124


- Wide  $V_{IN}$  Range: 3.1V to 17V
- Wide  $V_{OUT}$  Range: 0.6V to 99%  $V_{IN}$
- Dual Step-Down Outputs: 3.5A per Channel
- Spread Spectrum Modulation for Low Radiated & Conductive Noise
- Integrated 80m $\Omega$ /40m $\Omega$  N-Channel MOSFETs Provide Up to 95% Efficiency
- No-Load  $I_Q < 8\mu A$  with Both Channels Enabled;  $I_Q < 5.5\mu A$  with Only One Channel Enabled
- Programmable Frequency (500kHz to 4MHz) with  $\pm 25\%$  Frequency Synchronization Range
- Configurable for a 2-Phase Single Output at up to 7A
- $\pm 1\%$  Output Voltage Accuracy
- Current Mode Operation for Excellent Line & Load Transient Response
- Internal or External Loop Compensation
- Thermally Enhanced 3mm  $\times$  5mm QFN-24 Package

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

**Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high-performance analog company. More info at <http://lt.linear.com/07c>**

### About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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