40VIN/OUT, 1A Synchronous Buck-Boost DC/DC Converter
Offers 2.7V to 40V Input & Output Range

MILPITAS, CA - April 29, 2014 - The LTC3114-1 is a synchronous, current-mode buck-boost converter that delivers up to 1A of continuous output current from a wide range of power sources, including single-cell Li-Ion, 24V/28V industrial rails and 40V automotive inputs. The LTC3114-1’s 2.2V to 40V input and 2.7V to 40V output range provides a regulated output with inputs above, below or equal to the regulated output, maximizing power source flexibility and extending battery run time over step-down only solutions. The proprietary low noise buck-boost topology incorporated in the LTC3114-1 provides a continuous jitter-free transition between buck and boost modes, making it ideal for RF and other noise-sensitive applications.

The device’s selectable Automatic Burst Mode® operation lowers quiescent current to only 30µA, improving light load efficiency and further extending battery run time. The LTC3114-1 uses a constant 1.2MHz switching frequency and features pin-programmable average output current and current monitor. Proprietary buck-boost PWM circuitry ensures low noise and high efficiency while minimizing the size of external components. The combination of tiny externals and a 3mm x 5mm DFN or TSSOP-16E package provides a compact solution footprint.

The LTC3114-1 incorporates four internal low RDS(ON) N-channel MOSFETs to deliver efficiencies of up to 96%. Automatic Burst Mode operation lowers quiescent current to only 30µA, improving light load efficiency and extending battery run time. For noise-sensitive applications, Burst Mode operation can be disabled. Furthermore, current-mode control improves line and load transient responses while keeping compensation simple. Additional features include internal soft-start and inrush current limit, undervoltage lockout, thermal overload protection, short-circuit protection and output disconnect.

LTC3114EDHC-1 is available in a 16-lead 3mm x 5mm DFN package and the LTC3114EFE-1 is in a thermally enhanced 16-lead TSSOP package. Pricing starts at $3.95 each for 1,000 piece quantities. Industrial grade versions, the LTC3114IDHC-1 and LTC3114IFE-1, are guaranteed to operate over the -40°C to 125°C operating junction temperature range, priced at $4.35 and $4.51 each, respectively, in 1,000-piece quantities. High temperature grade versions, the LTC3114HDHC-1 and LTC3114HFE-1, are guaranteed to operate over the -40°C to 150°C operating junction temperature range, priced at $4.60 and $4.76 each, respectively, in 1,000-piece quantities. Finally high reliability versions, the LTC3114MPDHC-1 and LTC3114MPFE-1, are guaranteed to operate over the -55°C to 150°C operating junction temperature range, priced starting at $11.73 each, in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com/product/LTC3114.

Summary of Features: LTC3114-1

- Regulates VOUT Above, Below or Equal to VIN
- Single Inductor
- Wide VIN Range: 2.2V to 40V
- Wide VOUT Range: 2.7V to 40V
- 1A Output Current in Buck Mode
- 0.5A Output Current, VIN = 3.6V, VOUT = 5V
- Programmable Average Output Current
- Up to 96% Efficiency
- Burst Mode® Operation, 30µA No-Load IQ
- Current-Mode Control
- 1.2MHz Ultralow Noise PWM
- Accurate RUN Pin Threshold
- Thermally Enhanced, 16-Lead 3mm x 5mm DFN & TSSOP Packages
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, µModule® subsystems, and wireless sensor network products. For more information, visit www.linear.com.

LT, LTC, LTM, Linear Technology, the Linear logo, Burst Mode and µModule are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

Worldwide Contacts

North America and General Information
John Hamburger
Tel: (408) 432-1900 ext. 2419
jhamburger@linear.com

Doug Dickinson
Tel: (408) 432 1900 ext. 2233
ddickinson@linear.com

China (PRC)
Fanny Lau
Tel: 852-2428-0303
flau@linear.com

Angela Ao
Tel: (8610)6522 8081
angela.ao@ebacomms.com

Japan
Yoshikazu Funasaki
Tel: 81-3-5226-7291
yfunasaki@linear.com

Hitoshi Kasai
Tel: +0422-47-5319
kasai@miacis.com

Korea
Desiree Park
Tel: +82-2-565-6625
desiree@ezwire.com

Taiwan
Alice Wang
Tel: +886-2-28974705
alice@ezwire.com

Italy
Simona Labianca
Tel: +39 340 0571697
simona@ezwire.com

Germany
Ralf Stegmann
Tel: +49 (0) 71319234-11
raffi@ezwire.com

UK & Nordic
Alan Timmins
Tel: +44-1252-629937
alan@ezwire.com

France
Clotilde Zeller
Tel: +33 1 4614 87 09
clo@ezwire.com

This message was distributed by:

TechWire International Incorporated
Global Media Relations for the Electronics Industry
Press Releases - Contributed Editorial - Media Events
5315 Wirestem Ct - Naperville, IL 60564 USA
630.420.8744 - www.ezwire.com