



18V, 2A Synchronous Buck-Boost DC/DC with Dual Input PowerPath Control Enables Multi-Inputs & Extended Run Times

MILPITAS, CA – March 10, 2015 – Linear Technology announces the [LTC3118](#), a dual input, wide voltage range synchronous buck-boost DC/DC converter with an intelligent, integrated low loss PowerPath™ control. Its unique power switch architecture provides high efficiency operation from either input source to a programmable output voltage above, below or equal to the inputs. Its dual input capability makes it ideal for applications that use batteries or supercaps as secondary or backup inputs, in case the primary input is interrupted. Similarly, applications that use multiple sources such as a wall adapter and Li-Ion cells could utilize the dual input and buck-boost capability of the LTC3118. The LTC3118 can deliver up to 2A of continuous output current from a wide range of power sources, including single or multiple cell batteries, supercapacitor stacks and wall adapters. Its 2.2V to 18V input range on both inputs and 2.0V to 18V output range can provide a regulated output with inputs above, below or equal to the regulated output.

The LTC3118 uses a low noise, current mode buck-boost topology architecture with a fixed 1.2MHz switching frequency. Its unique design provides a continuous, jitter-free transition between buck and boost modes, making it ideal for RF and other noise-sensitive applications. The LTC3118's integrated low loss PowerPath controller is user programmable to prioritize and seamlessly transition between inputs while maintaining output voltage regulation. The combination of tiny externals and a 4mm x 5mm QFN or TSSOP-28E package provides a compact solution footprint.

The LTC3118 includes four internal low $R_{DS(ON)}$ N-channel MOSFETs to deliver efficiencies of up to 94%. User-selectable Burst Mode® operation lowers input quiescent current to only 50µA, improving light load efficiency and extending battery run time. For noise-sensitive applications, Burst Mode operation can be disabled. Other features include soft-start, overvoltage protection, short-circuit protection, thermal shutdown and output disconnect.

LTC3118EUFD is available in a 24-lead 4mm x 5mm QFN package and the LTC3118EFE is offered in a thermally enhanced 28-lead TSSOP package. Pricing starts at \$5.75 each, respectively for 1,000 piece quantities. Industrial grade versions are guaranteed to operate over the -40°C to 125°C operating junction temperature range. High temperature grade versions, the LTC3118HUFD and LTC3118HFE, are guaranteed to operate over the -40°C to 150°C operating junction temperature range. The high reliability military plastic grades, the LTC3118MPUFD and LTC3118MPFE, are guaranteed to operate over the -55°C to 150°C operating junction temperature range. All versions are available from stock. For more information, visit www.linear.com/product/LTC3118

Photo Caption: 18V, 2A Synchronous Buck-Boost DC/DC Converter with Dual Input and PowerPath Control

Summary of Features: LTC3118

- 18V, 2A Dual Input Synchronous Buck-Boost
- Integrated High Efficiency Dual Input PowerPath™ Plus Buck-Boost DC/DC Converter
- Ideal Diode or Priority V_{IN} Select Modes
- $V_{\text{IN}1}$ and $V_{\text{IN}2}$ Range: 2.2V to 18V
- V_{OUT} Range: 2V to 18V
- Either V_{IN} Can Be Above, Below or Equal to V_{OUT}
- Generates 5V at 2A for $V_{\text{IN}} > 6\text{V}$
- 1.2MHz Low Noise Fixed Frequency Operation
- Current Mode Control
- All Internal N-Channel MOSFETs
- Pin-Selectable PWM or Burst Mode® Operation
- Accurate, Independent RUN Pin Thresholds
- Up to 94% Efficiency
- V_{IN} & V_{OUT} Power Good Indicators
- I_{Q} of 50 μA in Sleep, 2 μA in Shutdown
- 4mm x 5mm 24-Lead QFN or 28-Lead TSSOP Packages

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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

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