

Dual Multi-Topology DC/DC Converters with 50V, 2A Internal Switches

Description

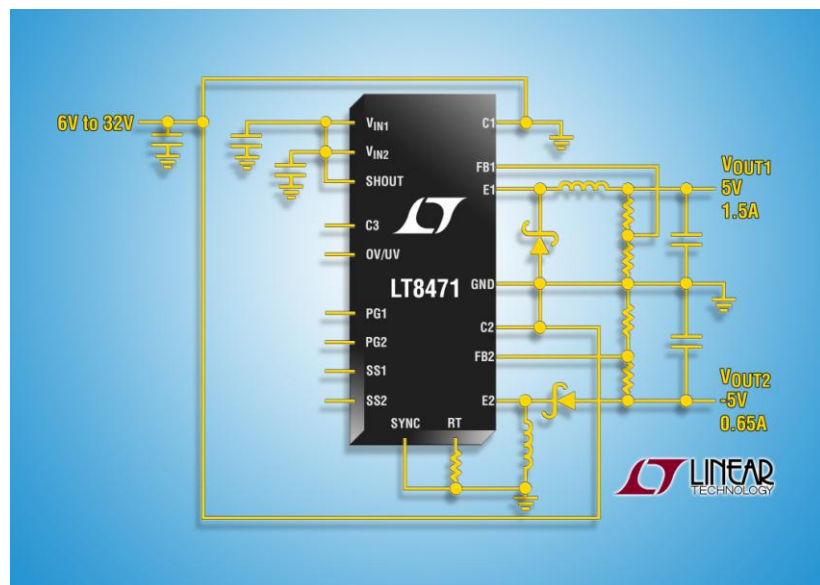
The LT8471, a dual DC/DC converter that utilizes two internal 2A, 50V switches and an additional 500mA switch to facilitate step-down, step-up, and inverting conversions. Each 2A channel can be independently configured as a buck, boost, SEPIC, flyback, ZETA or inverting DC/DC converter. This broad range of topologies and output configurations makes it ideal for a wide range of industrial and automotive applications. The LT8471 operates from an input voltage range of 2.6V to 50V, making it suitable for applications with input sources ranging from a single-cell Li-Ion to automotive batteries

The LT8471's 50V internal switches can accommodate applications with inputs and outputs as high as 45V. The device is capable of generating both positive and negative outputs from a single converter, making it ideal for a wide array of biasing applications. A small integrated 500mA boost converter facilitates both buck and single inductor inverting applications at optimal efficiencies. The LT8471's switching frequency is programmable and synchronizable from 100kHz to 2MHz, which keeps externals very small. The combination of a TSSOP package and tiny externals ensures a very compact footprint while minimizing solution cost.

The LT8471's high efficiency 50V switches deliver overall efficiencies up to 85% for buck and inverting applications. From a 6V to 32V input, the LT8471 delivers up to 1.5A at 5V and 650mA at -5V. A power good pin on each channel is offered for ease of use when event-based sequencing is required. The LT8471's switching frequency can be programmed via a single resistor or synchronized to an external clock between 100kHz and 2MHz, minimizing external component size and avoiding "noise critical" frequency bands. Anti-phase switching minimizes input ripple. Undervoltage and overvoltage lockout (UVLO/OVLO) is user adjustable for optimal system performance. Other features include external synchronization capability, soft-start and frequency foldback.

Features:

- Dual 2A and One 500mA, 50V Internal Power Switch Channels
- 2A Primary Channels Can Be Buck, Boost, SEPIC, ZETA, Flyback or Inverting DC/DC Converter
- 500mA Skyhook Channel Efficiently Generates Boosted Input Voltage
- Wide Input Voltage Range of 2.6V to 50V
- UVLO and OVLO Programmable on OV/UV Pin
- Soft-Start Programmable for Each Channel
- Fixed Frequency PWM (Set by RT Pin or Synchronized to External Clock)
- Anti-Phase Switching Reduces Input Ripple
- 20-Lead TSSOP Package



Applications:

- Dual Rail Power for Signal Chain.
- Buck/Buck, Buck/Boost, Boost/Boost, Boost/Invert, Invert/Invert, Buck/Invert