

150V_{IN} & V_{OUT} Synchronous 4-Switch Buck-Boost Controller with Integrated Switching Bias Supply

NORWOOD, MA – February 12, 2018 – [Analog Devices](#) announces the Power by Linear™ [LTC3777](#), a 150V high efficiency (up to 99%) 4-switch synchronous buck-boost DC/DC controller, which operates from input voltages above, below or equal to the regulated output voltage. Its 4.5V to 150V input voltage range operates from a high input voltage source or from an input that has high voltage surges, eliminating the need for external surge suppression devices, ideal for transportation, industrial and medical applications.

- View the [LTC3777](#) product page, download data sheet, order samples and evaluation boards: www.linear.com/product/LTC3777

To prevent high on-chip power dissipation in high input voltage applications, the [LTC3777](#) integrates a low quiescent current high efficiency switching bias supply for its internal power consumption. The output voltage of the [LTC3777](#) can be set from 1.2V to 150V at output currents up to tens of amps, depending on the choice of external components. Output power up to 500W can be delivered with a single device. Higher powers can be achieved when multiple circuits are configured in parallel. The [LTC3777](#)'s powerful 1.5Ω N-channel MOSFET gate drivers can be adjusted from 6V to 10V, enabling the use of logic-level or standard-threshold MOSFETs.

The [LTC3777](#) employs a proprietary current mode control architecture for constant frequency in buck, boost or buck-boost modes. The operating frequency can be synchronized to an external clock from 50kHz to 600kHz, while an input/output constant current loop provides support for battery charging and overload protection. The user can select either forced continuous mode or discontinuous mode to maximize light load efficiency. Additional features include seamless transfers between operating regions, a power good output voltage monitor, adjustable soft-start and input overvoltage lockout, and output voltage disconnect during shutdown.

The LTC3777 is available in a 48-lead e-LQFP package with pin skipping for high voltage spacing. Extended and industrial versions are available from –40 to 125°C. For more information, go to www.linear.com/product/LTC3777.

Summary of Features: LTC3777

- 4-Switch Synchronous Current Mode Buck-Boost Architecture
- Operation with Input Voltages Above, Below or Equal to the Output Voltage
- 4.5V to 150V Input Voltage Range
- 1.2V to 150V Output Voltage Range
- Up to 99% Efficiency
- Integrated Switching Bias Supply
- Input or Output Average Current Limit
- Adjustable 6V to 10V MOSFET Gate Drivers
- Compatible with Logic-Level or Standard-Threshold NMOS
- 500 Watts Output Power Capable with a Single Device
- Fixed Synchronizable Operating Frequency from 50kHz to 600kHz
- Output Voltage Disconnect from V_{IN} During Shutdown
- Adjustable Soft-Start
- ±1% Reference Voltage Accuracy over –40°C to 125°C
- 48-Lead e-LQFP Package with High Voltage Pin Skipping

Pricing & Availability

Product	Sample Availability	Production Availability	Price Each Per 1,000	Package
LTC3777	Now	Now	Starts at \$8.40	e-LQFP-48 7mm x 7mm

About Analog Devices

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